A DEFENCE OF PREJUDICE
AND OTHER ESSAYS

BOOKS BY JOHN GRIER HIBBEN, Ph.D.

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DEFENCE OF PREJUDICE
AND OTHER ESSAYS

BY

JOHN GRIER HIBBEN, Ph.D., LL.D.
Stuart Professor of Logic, Princeton University

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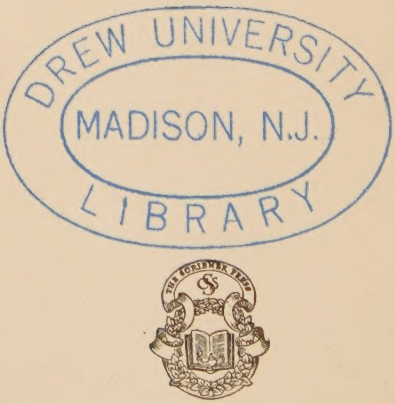

To

MOSES TAYLOR PYNE

A FRIEND FOR WHOM
MY PREJUDICE NEEDS NO DEFENCE

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I

A DEFENCE OF PREJUDICE

WHAT is prejudice? Is it always something unreasonable? Is it to be regarded necessarily as an intruder among the more sober activities of the mind? Is it the enemy of clear thinking? Is it the counterfeit of a true judgment? There are many who would give an unqualified assent to these characterizations of the nature of prejudice. I am persuaded, however, that there is a certain form of prejudice that admits of a rational defence. In this defence, moreover, I am not taking merely the part of a devil's advocate; but, on the contrary, I am profoundly convinced that there is a prejudice which has a proper place in the processes of the mind, and must be reckoned with as a natural factor in our thinking, and is not to be regarded in any sense as an abnormal and disturbing element. It is very easy to insist that reason should be free from all taint of prejudice; but no one

actually maintains consistently and continuously so high an ideal as this in practice. This is not merely a confession of weakness that prejudices will steal into the deliberations of reason despite our most vigilant guard, and in the face of protest and serious effort on our part to drive them out; there is, on the contrary, substantial ground for the contention that prejudice has a legitimate function to perform amidst the varied activities of the mind.

A prejudice is not always an unreasonable judgment; it may be merely a judgment which is unreasoned. There is a vast difference to be noted in this distinction. An unreasonable judgment is, of course, contrary to reason and therefore reason itself must repudiate it. But the judgment which is simply unreasoned may prove in the course of events to be eminently reasonable, and as such even in its unreasoned form may serve a most useful purpose in our thinking.

These unreasoned judgments are absolutely indispensable in the economy of our mental life. If we exclude all judgments which are not accompanied by a satisfactory proof of their validity, a tremendous waste of time and

energy would inevitably result. For it is a fundamental law of our intellectual activity that the processes of reason by which we arrive at certain conclusions often drop out of memory: but the conclusions themselves remain as a permanent deposit of knowledge. The proof which we once knew and perfectly understood may be forgotten, but the truth which it served to establish is lodged permanently in the memory. The history of its origin we can no longer recall to mind. It has no recognized ancestry; because much of our knowledge changes form in the processes of assimilation. Its original setting is forgotten. It appears, therefore, as a detached judgment. It is a part of the stored energy of thought. The truth has become ours in a peculiar sense inasmuch as it has been merged into the very texture of our thought. There may also be associated with it the impression, indefinite and vague though it be, that as a reasoned judgment it once passed muster and received the endorsement of reason. The proof is forgotten, the credentials are lost, but the thought remains. Although for the moment it cannot be justified by the law of

sufficient reason, it nevertheless is allowed a place in our world of knowledge. The economy of the thought processes not only warrants such a procedure, but demands it as a necessary method in all of our thinking. Any impression which we vaguely recognize but cannot justify rationally must certainly be regarded as a form of prejudice.

We have only to examine our store of knowledge in order to discover what a vast amount of it is represented by these remote survivals of past study and travail of mind. The principles of a science, for instance, are remembered and accepted as true, and it may be at times are used by us in some practical emergency; and yet how mysteriously vague and elusive seem the proofs upon which they rest and which we long ago so carefully mastered. We assent with complete confidence to the Newtonian law of universal attraction; we believe that the earth moves around the sun; we are in complete accord with the proposition that the square on the hypothenuse of a right-angled triangle is equal to the sum of the squares on the two sides. There is indeed an uncomfort-

able familiarity about these utterances. But when we are pressed for a justification of our belief in statements such as these, then all that we can say perhaps is simply that in a general way there is a true ring about them. In other words, they are judgments to which we give assent, but which we cannot prove,—that is, prejudices. And yet the fact that they partake of the hospitality of our minds is not to be regarded necessarily as a weak concession of ignorance on our part, but rather the normal manner in which the laborious processes of past thinking are definitely concentrated and recorded.

I think we will all recognize a similar mental experience if we stop to challenge our opinions concerning the character of a person or of a period in history. There are a few instances, perhaps, concerning which we have recently refreshed our memory or which lie, it may be, in the immediate sphere of our especial study and interest that lend themselves to a satisfactory and adequate interpretation. Outside of an exceedingly circumscribed area, however, we find ourselves unable to justify certain esti-

mates of character, certain impressions of a sense of value and significance, which we nevertheless firmly maintain, and that often with feeling and fervor. We have opinions, possibly very pronounced, regarding the character of the Black Prince, or of Poppæa, or of St. Francis; but would it not be difficult, if not altogether impossible, to justify each judgment by an array of indisputable facts which we could summon upon call from the remote stretches of the memory? If we cannot support our opinions by adequate proof, is it not quite correct to regard them in the light of prejudices? And if we rid our stock of knowledge consistently and thoroughly of all such prejudices, are we not impoverishing our minds for the sake of an ideal which is quixotic and impossible? The rigor of reason must be tempered in this respect to the natural limitations of our mental powers.

There is still another kind of prejudice which is similar to that just considered, namely—the class of judgments which are born of other minds and which nevertheless we come to appropriate as our own. The reasons in which

such judgments are grounded we have never examined ourselves,—possibly we could never understand them even if they were presented to us with the most elaborate explanations; and yet these second-hand judgments cannot be eliminated wholly from our body of knowledge without an incalculable loss. The primary sources of knowledge are not available to all persons. There are many truths which are supported only upon expert testimony, and which nevertheless become the common property of mankind. Knowledge comes by reflection as well as by assimilation. And the light that is reflected from another's mind we should never despise; for there is a community in the treasures of thought. We possess far more than we earn. There is a universal liberty of appropriation; for the wealth of knowledge like the bounty of nature is free to all. If, therefore, we exclude these prejudices of reflected opinion from our thinking, no harvest of thought is possible save that of our own sowing and tilling. And this would signify an appreciable shrinking of our world in all of its dimensions; for there is no thought, however original, which

does not rest to some extent at least upon a credit basis.

There is another class of judgments which merits the name of prejudice. It comprises those judgments whose source may be traced to the subconscious states of the mind. We must acknowledge that much of our thinking is singularly affected by the processes which are connected with the more obscure activities of thought. There is a secret collaborator within, whose contributions do not seem to bear the stamp of our own creation, but which we have no hesitation in claiming and using as our own. They are ours and yet not ours. We must not fall into the error, however, of characterizing these judgments which spring from the subconscious region of the mind as abnormal. They, on the contrary, are the normal reflex of our conscious activities. They may be trusted to the extent that we trust the judgments which we form through the conscious procedure of reason. The intuitions of a fool are not wisdom. On the other hand however, if the exercise of our faculties at the focal point of consciousness is uniformly true,

then it follows naturally that the activities which find play within the penumbral area of our minds will be determined by a like habit. If reason is the controlling factor in the conscious evolution of our opinions generally, then reason will hold sway within the realm of the subconscious operations; but if on the contrary we have formed the habit of following the suggestions of fugitive feelings, of whim and caprice, we may be quite sure that we will discover no trace of any oracle of wisdom within the hidden depths of the mind. We are all aware of the activity of these undercurrents of reason in our thinking. We reach certain conclusions without being conscious of the process of reasoning connected with them. They are so little a part of us that they seem prepared for us rather than produced by us.

We find ourselves, for instance, face to face with a new situation presenting problems which we have never before considered. A quick decision must be made. There is no time for mature deliberation. It is necessary to judge of the trustworthiness of a man, or of the

wisdom of a business venture, or of the probable success or failure of a proposed policy. The circumstances force us to make what may seem to be a snap judgment. To state a definite reason as the ground of our decision is altogether impossible. Behind the decision is a play of subtle forces producing a certain total impression which cannot be expressed in words, and which stubbornly resists all attempts on our part to analyze it. It is not amenable to the control of the reason, nor does it appear in any form which enters as a familiar factor in the usual processes of our thinking. It is a prejudice, if you please—a judgment whose force we are constrained to recognize but whose truth we cannot possibly prove. It is sufficient to provoke action, but it is not adequate to justify itself. In such a case the subconscious activities seem to conserve the essential elements of our conscious experiences. A man with a wide knowledge of his fellows has accumulated, day after day, year after year, a wealth of experience which becomes a part of himself—not consciously formulated in maxims of wisdom, but assimilated and stored in the deep recesses

of his nature. In every one of us there is a high potential of this kind of unformulated experience. It represents the abiding mood and general disposition of the man; it is a sort of diffused sagacity which eludes all attempts at definition. However, when occasion offers it becomes at once active and efficient. It directs our purposes and gives a final cast to our judgments. We trust it instinctively and yet withal blindly; but who shall say unreasonably?

Our subconscious activities, however, not only serve to mediate a quick decision, but they tend as well to precipitate a delayed decision. One finds himself again and again confronted with a situation wherein he is torn now in one direction, and now in another. The arguments pro and con are nicely balanced. Out of the bewilderment of mind, or even of an agony of spirit, there will come a settling of the will toward one of the rival alternatives, and a decided dip of the scales. In such an experience the mind is aware of a certain compulsion which seems to transcend its conscious autonomy. There is a welling up of the subconscious stream

from its source in the depths of that buried life which makes every man a mystery to himself. At times the most momentous decisions of life are reached through the mediation of these influences which, while they may not be contrary to reason, nevertheless transcend it.

It is then that a man seems to be a passive spectator. Something within acts for him. He finds himself determined by a deep-seated prejudice, as he is constrained to confess, if he ever pauses to reflect upon it at all. Is not one's profession, or hobby, or the cause to which he may give his life, or his absorbing pursuits, a revelation in some degree at least of his most deeply rooted prejudices? But will any one maintain, however, that he would wish to be freed from all such influences? Are they not an integral part of his being? And are not the hidden powers of his nature after all the measure of the man?

There is still another function which our prejudices fulfil; they serve to produce the overtones of character. It is the overtone that gives a distinctive quality to sound; and, in a similar manner, character may be regarded as

having its peculiar timbre. There is a certain ring about a man's character—it is true or false, pleasing or unpleasing, harmonious or discordant, as the case may be. Reason may determine the tone, but it is the prejudice which often produces the overtone. We love a man on account of his prejudices; we hate him also for a like reason. Strip a man of his prejudices, and only the commonplace remains. Individuality is the projection of our prejudices. Remove the prejudices and the individual is merged again with the crowd. He is only one of many. He no longer appeals to our imagination. There is no more of interest or charm or power about him. Character without a dash of prejudice is insipid. A man without a fair amount of prejudice in his nature always lacks intensity of conviction. There may be a glow of intellectual light, but there is a conspicuous absence of fire and driving power. There is often a certain judicial poise of mind which reveals itself in a tolerance that is an indication of weakness rather than strength. Such a man never lets himself go. He always sees two sides to every question, and can never com-

mit himself to the one or the other. Freedom from prejudice is often indicated by a vacillation which is pitifully weak and ineffectual. What distinct and striking impression would the character of Carlyle make upon us, were it to be separated completely from his prejudices? or would it be possible to read Boswell's Johnson, if the work were to be expurgated of everything which savors of a prejudice?

It is also the prejudices underlying character, the prejudices of good sense and of good taste, which often operate as a safeguard against the temptations of the reason; for reason has its temptations as well as the passions—not true reason, but the subtle casuistry of reason. It is easy in the times of extraordinary pressure to convince oneself that the worse cause is really the better, that darkness is light, and light darkness. Then it is that the prejudices which are deeply grounded in our nature tend to steady us. It is possible by plausible sophistries to justify many a course of action wherein our clear vision has been dimmed by the allurements of sense, of selfish interests, of greed and ambition. But at the last we shrink from

doing the very thing which we had proposed, and which we had rationally defended. There is something within which gives us pause. We are saved in spite of ourselves, even in spite of reason itself. We find ourselves under the restraint of some undefinable feeling, some fancy, a prejudice indeed, which calls to us from the mass of old-fashioned principles which we had thought forever banished, but which the sophistication induced by an intimate experience with the world had not wholly eradicated. No power which operates upon the human mind is stronger or more permanent in its control than this prejudice of honor. There are certain persons who seem to be almost perversely conscientious; their native shrewdness and the stirrings of the egoistic instincts are constantly overbalanced by their sense of honesty and the overpowering compulsion of their altruistic impulses.

It is in the transition times, when reason is obscured by interest or extinguished by passion, that the commanding voice of prejudice enters its caveat to which it is well to give heed, and instant obedience. Prejudice thus

proves in many instances to be a saving grace. It is the instinctive morality after all which is the supreme test of character. There is a calculated virtue, a wisdom always seeking to be justified of her children, which nevertheless does not reveal the man as he really is. His innate tastes and propensities, however, the whole body of his unreasoned predilections and impulses which are the natural soil of prejudice, serve to disclose a man to himself and to others as the very mirror of reality itself. If human nature were devoid of prejudice, the heroics of morality would never be written. That impulsive nobility which is the flower of character is the kind of prejudice which at times flies in the face of reason, following the irresistible lead of its own nature in the scorn of consequence. But is it not in turn approved of reason itself, when we come to pronounce a deliberate judgment upon its moral worth? The prejudice which outstrips reason may nevertheless draw reason after her in her flight, so that the two may eventually meet in mutual recognition and harmony. The prejudice, therefore, which transcends reason,

or which anticipates reason, or which is in secret born of reason, is not, necessarily contrary to reason, but may be rationally defended and justified.

II

THE PHILOSOPHY OF OPPOSITION

THE University of Berlin is celebrating this autumn, of the year 1910, its one hundredth anniversary. The beginnings of this educational enterprise were intimately associated with its pioneer professor and rector—the patriot, philosopher, and teacher, Johann Gottlieb Fichte, who by his labors and personality gave to the university the early promise of distinction which through the course of its history it has so brilliantly realized. There is a phase of the philosophy of Fichte which profoundly affected the moral traditions, not only of the university, but of the German people generally, and which should prove exceedingly suggestive to all who may be concerned with a practical philosophy of life.

This idea of Fichte's I would characterize as the philosophy of opposition. His theory was born of experience, and through bitter years of adversity and deprivation he evolved the car-

dinal doctrine of his practical creed:—that, in the making of a man, power is born of opposition; that struggle begets strength; that resistance provokes vigor of body and of spirit; and that the very obstacles to progress make progress possible. This was not merely the teaching of the class-room. It became the dominant note of his stirring appeal to the German nation. By his challenge of circumstance, Fichte sought to arouse his countrymen from the torpor of humiliation which had been induced by the disasters of the Napoleonic wars. In his "Addresses to the German Nation" he endeavored to awaken the spirit of the people to an appreciation of the fundamental truth that the distress of the nation is the opportunity of the patriot; and that out of the depths of adversity it is possible for a people to arise to a new life of strength and power. In this he appeared not only as a priest to the national conscience, but as a prophet of the nation's destiny.

Fichte's philosophy, however, is not for the past alone, nor exclusively for the German people; but now, after a century, and in reference to the present-day problems of life, we may

well pause to consider the kindly offices of opposition in the evolution of human capacity and character. Human nature is the same the world over; and, quite irrespective of the age or of the land in which one may happen to live, it remains universally true that man is born to struggle, not only for what he may wish to possess, but also for what he is fitted to become. We are in this world to fight. Under what banner does one draw his sword? That is the question of chief interest and concern.

The earliest consciousness of self, the vague impression of one's individuality as distinct from the world about him, comes to the child, when for the first time he becomes aware of the barriers of his young life. As he puts forth his hand, and feels the first shock of opposition as a check upon his free activity, then and there he experiences the first throb of personality. The "I," the heart of his being, the inner self, is revealed by the resistance of the things or forces about him which he must encounter, and which he recognizes instinctively as something different from the self within, and never to be confused with it. The power of self-assertion

is provoked by the very power which opposes the inner self and seeks to overcome it.

And later in life there often comes a second awakening to a more profound sense of personality, when we find ourselves amidst a storm of opposition which emerges in some significant crisis of our experience. Such a crisis may mark not only a new birth of power, but also a new order of being. It is often a moral renaissance. Under the fire of opposition, in the collision of opinion, a new spirit is quickened, daring great things and capable of great things. In an experience of such a nature, one realizes that he is something more than a human machine; that he is not a puppet nor a slave; nor a being, merely to feed and sleep and play; nor a creature caught in the toils of circumstance, but a man and as such bound to recognize the truth that man's vocation is a call to freedom and to duty.

It is well for us if we early recognize the fact that every difficulty in life is a challenge. Is there something within the man to meet it, or not? That is the question which every one must ask himself. Upon his response his fate

is fixed. Obstacles suggest opportunities, if they are only regarded in their true light; they put a man upon his mettle, stimulate his energies, strengthen his power of resistance, increase his art of resource, and inspire a spirit of courage and determination. If there is any latent power, resistance discovers it. The line of least resistance, on the other hand, can never be the line of development and of progress; for then there is nothing to call forth hidden possibilities. But resistance creates necessarily a demand for new methods and devices, new processes, new inventions, the conservation of forces, and the more considerate direction of effort.

Not only, however, is progress assured by overcoming resistance, and in spite of it, but resistance itself is an essential factor in progress. No leverage is possible without the resisting medium of a fulcrum; so that without resistance it would be impossible for us to get a foothold upon the earth even in the ordinary act of walking. We know that it is not the strength of the arm only, but the stubborn stuff of the bow which speeds the arrow. It is a common-

place, moreover, of electrical theory, that a current of electricity, passing freely through its conducting wire, gives no visible evidence of its existence; but when it meets the resistance of the carbon points, it bursts into light. The illumination results from the opposition offered by the resisting medium, and this generates heat of such intensity as to become incandescent and the bearer of light. In the world also of human affairs and relations, much of the light has its source in the clash of opposing forces, and the struggle to overcome resistance.

Life is a game, we say; and from time to time we urge one another to play the game fair and to a finish. In this reference, we must remember that the zest of a game consists in one's skill to overcome opposition. An opponent who fails to call forth our best endeavor deadens interest in the sport, whatever it may be. A one-sided contest means loose playing and flagging zeal; on the other hand, the more skilled and alert an adversary, the more resourceful and aggressive our game. In the contests of life where there is no worthy competitor, there can be but slight achievement and little glory.

The uphill game, however, which is won through no adventitious aid of favor or fortune, but solely upon its merits and by stubborn persistence, brings a glow of satisfaction which is wholly unknown in the triumph of an easy victory. We do not care to play with a novice, we demand the rigor of the game, and free scope for the display of our powers. It is possible, therefore, to meet the opposition which life holds for us, in the spirit of adventure, and ride forth to meet the foe with high hope and the joy of battle in our heart.

This idea, however, which would represent life as a game, does not adequately portray the true philosophy of opposition. The game conception of life emphasizes perhaps too much the idea of victory or defeat; for to overcome in life is not merely to win a victory, but it is rather to gain a mastery over the powers which oppose us. And complete mastery is possible only when we learn the secret of transforming opposing powers into co-operative agencies in serving our needs and ministering to our purposes. There is a savage superstition that every foe killed in battle surrenders his spirit

of valor and courage to the one who slays him. In some such manner we gain in strength when we can so subdue opposing forces as to make them contributory to our resources of energy, and thus in a sense a part of us. All conquests in life come through the ability to dominate circumstance. We are not passive beings, to become the play of nature's forces about us, but free agents, with the power of initiative and the will to compel these forces to do our bidding.

The two conquests which are of supreme significance for us, which we must achieve, or else face inevitable failure in life, are the conquest of knowledge and the conquest of character. Our primal limitation throughout the various phases of experience is that of ignorance. When we find ourselves in any situation where the nature of the forces in opposition to us is unknown, such forces are not only an obstacle to progress, but may prove a most serious danger as well. It is not simply that all effort is obviously futile under such circumstances, but it is quite likely also to be disastrous, inasmuch as our very striving may become our undoing. But when the nature of the powers

arrayed against us is adequately discerned, it is then possible, not only to combat them successfully, but also to direct them to our obvious advantage.

The life of every individual may be appropriately represented by an inner circle of knowledge, placed within a vast outer circle of the unknown. Growth, progress, attainment, all are possible only when there is an ever-increasing expansion of this inner circle, transcending its own limits, and appropriating more and more of the outlying region within the area of its comprehension and appreciation.

Undiscovered countries forever lie beyond the confines of our understanding, and we feel under compulsion to push forward the frontiers and possess these new lands in the name of knowledge. The process of transforming the unknown into the known is life, education, development. It is a process essentially of assimilation. It consists in making knowledge a part of our own being; for knowledge is not primarily a possession, it is a power; it is not a stored mind, it is trained skill; it is not a mass of information, but a living spirit. In this sense

we overcome the world, therefore, when we so comprehend the nature of its powers as to make them our own, and compel them to obey our will.

We speak of "the world in which we live," or of "the world which is about us." These phrases, however, are quite misleading, if they are taken literally. "The world in which we live" is in reality only so much of the great world, after all, as lives in us; it is that which we understand, and which our knowledge commands. It would be truer to fact, therefore, if we should say that the world is in us, rather than we in the world. A million persons live in one and the same city, and yet their various pursuits, occupations, and professions form distinctly separate worlds of activity and of interest. Each one makes his own world; for knowledge creates as well as discovers. Consequently one's world is large or small, as one chooses. Its boundaries are determined by that area which one's intelligence controls, and which one has reclaimed from the waste stretches of ignorance. Our world is simply the sphere in which our skill and proficiency find play, and

in which we speak with authority. The building of such a world is no light task. The pursuit of knowledge is proverbially difficult, and yet in the struggle for it we are fighting for a kingdom.

The progress of knowledge is illustrated not only in the development of individual capacity and efficiency, but as well in the history of humanity as a whole. The progress of civilization has been a continuous process of enlarging the area of commanding knowledge generation after generation. By the toil of the ages, the conquests of human thought have been steadily maintained. Nature, however, does not reveal her secrets gratuitously; but they must be wrested from her. For nature, like the kingdom of heaven, suffereth violence, and the violent take it by force. Man has invaded nature from many sides, and has established over every conquered region his sovereign control. Even that which lies beyond the range of his observation must sooner or later surrender to the bold attack or patient siege of his subduing thought. There is a whole universe of supersensible phenomena, a world of the all-per-

vading ether, a world of magnetic fields and electric waves, a world of ultra-violet rays, of radio-active forces, of ions and electrons, of ideoplasm and entelechies, a world which eye has not seen, nor ear heard, but which the mind of man has penetrated, and brought under its control. Man possesses the earth, and his title to it is knowledge. His understanding of the laws of nature is a patent of proprietary right over the domain of nature.

However, mere knowledge of itself is not power. To convert knowledge into power there must be ceaseless activity, and a wise direction of all one's energies. With every effort of will which man puts forth to command and humanize his environment, there is an expansion of the inner circle of personality as well as that of knowledge. Wherever resistance is overcome, limitations removed, or difficulties transferred into advantages, there is a conquest of character, and the growth of a larger soul in the process of appropriating to itself a larger world. When the circle of life contracts, it is evident that the world is encroaching upon the domain of personality; but when it expands, we may

be sure that the power of personality has asserted itself, and is in the way of overcoming the world. An eternal warfare is waging between the necessity of nature on the one hand, and the manifestation of the free spirit of man on the other. In this contest man has always the advantage, for he wields the weapon of thought, against which no foe can prevail.

In his philosophy of life, Fichte regards the material world, the course of its events, its routine of universal law, the every-day circumstance and commonplace of experience, as merely the stage-setting of the great moral drama of life. "Our world," he says, "is the sensualized material of our duty. What compels us to yield belief in the reality of the world is a moral force,—the only force that is possible for a free being." Every historian is bound to regard the world, in a certain sense at least, from this Fichtean point of view; for the end of history is primarily the display of character, and the office of the historian is essentially that of a psychologist who deals with human documents. All institutions—social, political, and religious—represent the objectified will of man.

They make permanent record of habits, of controversies and conflicts, of received opinion and established procedure. The events of life are of slight significance which fail to show the good or evil of human nature, its weakness or its strength, its noble or ignoble strain. Even the work of a man's hands should give some evidence of his quality of mind, and disposition of heart, some intimation of his purpose and desire, of his struggles, of his defeats and victories.

The forces of nature with all the material elements of the world subserve therefore the ends of a higher order, the moral order, and they possess for us a final significance only in so far as they directly or indirectly fulfil this function. All things have a meaning for us, according to their relation to man, and man has a meaning according to the position which he is able to take, and maintain, amidst the obligations and responsibilities of his surroundings.

For a man's life, however, to have a moral significance, the inner circle of power should expand in such a manner as to enclose within

its bounds of control other selves as well as other things. The nature of man is such that he does not develop normally in solitude; for it is indeed true that character is formed in the stream of the world. While man has to contend against the forces of nature and subdue them to his will, the supreme test comes when the conflict is with human nature, with another personality like himself, which stands opposed to him, urging equal rights and equal privileges. The gospel of self-assertion therefore must be tempered by a due consideration of others.

When we urge the rights of freedom and of conscience for ourselves, we are constrained in consistency to recognize similar rights for others whose wills may clash with ours. The rules of the game are made impartially for all comers, and not for any individual or for the few. The rights of an individual, however particular they may be in any specific instance, can be justified solely by proving that they rest upon some universally valid ground. What I can in justice claim for myself, and if necessary should fight to maintain, I must in all honor allow even in my thoughts to any other human being simi-

larly situated. Life is not a struggle for existence in which one wins necessarily at the expense of another's loss, where one survives while the remnant is pushed to the wall. This is a poor view of life; it is the animal view of life; it is anti-social, and inhuman. There is no relation between man and man in which some reciprocity of advantage may not be secured, and it is our paramount duty to discover the means to this end, and cause it to prevail. The most signal victories in life are gained, not by conquering others, but conquering for them. We overcome, not by excluding our fellow-men from the circle of self-realization, but by enlarging that circle so as to include others within the area of common interests and sympathies. To convert an antagonist into an ally is the consummate art of diplomacy. To conclude a wise treaty between two nations upon terms of mutual benefit is of greater service to one's country than winning a battle, or sinking an enemy's fleet. The supreme victory is that which can be shared. In human affairs the conquests of co-operation alone are worthy. Through them the individual creates for him-

self an empire of power whose boundaries are determined solely by the number of lives which are brought within the range of his care and concern. One who is conscious that he holds his power in trust will not be likely to use it arbitrarily, or tyrannically, but with justice to all, and to the one end,—that of the common good.

The relations of life approach the normal as individual progress is identified with some form of social welfare, and the prosperity of one becomes the good fortune of the many. When the conditions of society, however, tend to array man against man, class against class, and life becomes a veritable struggle for existence, then all co-operative endeavor must cease, which means always an abnormal state of human relations, and the deterioration of social and national life.

In the Germany of Fichte's age, foreign invasion and oppression had restricted the free spirit of high endeavor, and had discouraged all effort save that of the bare preserving of one's existence. Fichte felt that under such conditions progress either of the individual or

of the nation was wholly out of the question; that co-operative effort would be unavailing, and striving for individual advantage would be ignoble.

These sentiments he expressed to his class at the close of a lecture one memorable day in the year 1813. He spoke to them with a grim fervor concerning the impending danger to their country in the presence of an invading army, and the patriot's duty to respond to the call of need; then he concluded his appeal with these ringing words, which proved to be his valedictory to his students, and to the German people: "This course of lectures will be suspended until the end of this campaign. We will resume them in a free country or die in the attempt to recover her freedom."

Such was the spirit of one whose philosophy of life is most strikingly illustrated in his profound conviction that "a nation becomes a nation through common struggle."

III

THE PARADOX OF RESEARCH

BECAUSE this is a practical age, and also pre-eminently an age of extensive investigation, it might seem that the chief incentive to research should be the possibility of adding to the store of practical knowledge, and thereby increasing the general efficiency of human endeavor. But, as we read the history of scientific discovery, from the first strivings of primitive thought to the present time, we are impressed with the fact that utility is not always the mother of invention.

This is the paradox which confronts us throughout the whole course of the development of scientific thought:—If man questions nature for the purpose merely of wresting those secrets which shall minister directly to his needs or comfort, he fails to attain his end, or he attains it only in a meagre way; but if, on the contrary, he goes to nature with a desire to know her secrets for their own sake, the

revelation often brings with it a wealth of knowledge which, in turn, admits of untold applications as regards the practical conveniences of life. If utility is the sole incentive to research, the results will range on a lower level; if, however, utility is forgotten in the passion to get at the heart of things for their own sake, it sometimes surprises us upon the way. And the reason of this is obvious; for utility, in all practical relations, results from the application of certain underlying principles to the concrete problems of life. The more central and comprehensive the principle, the wider will be its scope of practical application. The principles most fertile in products of utility are often most deeply hidden. They lie at the centre of things; it is only the most searching inquiry which will disclose them. With utility as the sole guide to research, the mind naturally ranges over the surface of things. The more profound levels seem far removed from practical considerations and results.

The practical, however simple it may be, is always the embodiment of some theory. The telephone, the incandescent light, the electric

car—these are simply the concrete expression of a great electro-magnetic theory. The bridge swinging free and secure over the stream, self-supported by the exact calculation of its stress and strain, is merely a set of mechanical laws objectified. If you start in your research with the sole object of solving a specific problem of practical significance merely, the result, if successful, is limited in all probability to the special end in view; on the other hand, if you set yourself the larger problem of investigating certain phenomena which have peculiarly attracted your interest for the purpose of discovering their nature and understanding their laws, then the revelation of a comprehensive principle carries with it a whole world of possibilities. While a principle is one, it comprehends the many; for it admits of a multiplicity of application which knows no limit. Nature thus sets a premium upon the study of her mysteries for their own sake.

There is such a thing as disinterested knowledge as well as disinterested benevolence. There is a scorn of consequence in the intellectual world as well as in the moral which tends in like man-

ner to provoke unhesitating approval and admiration. There is a persistent spirit in the pursuit of truth, which is dissatisfied as long as there are any unexplored remainders of knowledge. When the challenge of the unknown is once heard, there is a restlessness which is impatient of ignorance, a natural impulse to seek the reason of things, an instinctive curiosity which is not content merely to see, but which must also understand, and which is a perpetual spur to perseverance through all the exactions of laborious research. Whenever there is this inner constraint, there is a largess of spirit which has no thought of placing a patent upon the output of its brain. The glow of discovery is a sufficient reward, to which nothing can be added save the satisfaction that others share it.

It has been urged, however, that the natural origin of knowledge is to be traced to the effort which is put forth in order to satisfy some felt need. With the conscious and pressing necessities of hunting and fishing, of warfare, of cooking, of domicile and of raiment, man was quick to invent the first crude tools and weapons,—a covering for his body, a roof over his

head, also utensils in which he might prepare his food and which would prove indestructible when exposed to fire. Later, the pursuits of agriculture and the early beginnings of the arts of commerce and manufacture gave rise to implements and machines representing an infinite variety of inventive skill. It is, however, a primitive age wherein knowledge arises solely in response to the demand of utility. Truly, a higher stage of civilization is reached where there exists a class, however small, which is able to devote its time and energies to the pursuit of truth for its own sake. Such a body of men has been styled the "leisure class." It is a leisure not merely from manual labor and commercial pursuits, but it is above every other thing a leisure from the servitude of utility. Such was the class of philosophers and mathematicians in the early history of Greece. Such is the scholarly class in every age, provided the appellation of "scholarly" is justly merited. The scholar, in his devotion to his subject, in his consecration to the high vocation which he follows, must be one who is emancipated from the domination of the utility idea. Then only

is he a free man in the kingdom of knowledge. Bacon has said that the end of all scientific investigation is "the gathering of fruit"—that is, the turning of all discovery to some practical account. The true produce of the scholar's brain, however, is of the nature of seed rather than of fruit, and that of incalculable variety and possibility. The utilitarian strain which was the blemish of Bacon's character was likewise the defect of his scientific method.

Although the investigator may not have sought that which is useful, yet his discoveries often admit of a direct practical application to the every-day needs and comforts of life; and so the practical value, which, throughout the whole course of his investigations was never sought and never dreamed of, may become realized, nevertheless, in full measure. The secret of nature once discovered becomes the ground of a new form of reasoning; new minds busy themselves with the practical problems which may be suggested by it. Thus in the wake of the discoverers in pure science follow the inventors. The men who were the pioneers in the field of electricity and magnetism labored

with a keen interest born of a constraining love of nature, and with no thought of gain save in the discovery of that knowledge which is its own reward. And yet the work of such minds as Oersted, Ampère, Faraday, and Henry opened the way to the electric telegraph and the innumerable applications of their electro-magnetic discoveries, to the benefit of the race and the progress of civilization. Also, in our own day, the investigations of Hertz in Germany and of Thomson in England, incited and sustained by an interest purely scientific, have made the system of the wireless telegraphy possible.

The discoveries of the rays of Lenard, of Becquerel, and of Röntgen were the result of research which was conducted in a like spirit; moreover, they have led to practical applications in the field of therapeutics and surgery which are of inestimable service; nor is the possibility of their further utility by any means exhausted. The practical value of a truth is often a kind of by-product which direct research does not reveal. The great science of modern chemistry has been built upon the foundations which were laid by the genius of Lavoisier, who

brought to his labors a spirit fired by a love of nature for her own sake. However, the practical output of those labors has modified essentially every phase of our modern industrial, domestic, and commercial life.

The application of chemical truth to the problems of agriculture and physiology, through the brilliant work of Liebig, was possible only because of the toil of the many whose eyes were never upon the goal either of general utility or personal reward. In a quaint old writing of one of the pioneers in chemistry, Beccher, called the "Physica Subterranea," the author speaks of chemists as a "strange class of mortals, impelled by an almost insane impulse to seek their pleasure among smoke and vapor, soot and flame, poisons and poverty." "My kingdom," said he, "is not, however, of this world. I trust that I have got hold of my pitcher by the right handle, the true method of treating this study; for the Pseudo-chymists seek gold, but the true philosophers, science, which is more precious than gold." Such men may be nobly doomed to lives of unrequited sacrifice; but they leave to their fellows what they themselves

never possessed,—the means of increased wealth, health, comfort, and power.

If utility were the sole incentive to research, that most admirable of all graces, the patience of hope, would often fail; for the practical value of knowledge is slow of revelation. Knowledge, to be practically available, requires in many cases to undergo an aging process. The new wine of truth also needs the touch of time. The most beneficent ends are often so remote that they can be disclosed only after a long series of discoveries, which lead up to them by a natural sequence, but which afford in the process of their unfolding no intimation whatsoever of their ultimate utility. When the utility is not obvious in the first stages of an investigation there is need of a deeper incentive, so that research may not be abandoned in a moment of discouragement. And discouragement will come very soon if no evidence of practical results is forthcoming.

It is to be observed, also, that the utility of any portion of knowledge depends, in many instances, upon its combination with other portions. Alone, it is barren. It has no utility in

itself. But it may contribute certain elements which, in collocation with others, make for utility of singular value. Darwin, in the line of his own investigations, has drawn attention to the fact that utility in most cases depends upon the co-ordination of various elements which are separately useless. It frequently happens in other fields also that the labors of many minds must be brought together in order to produce practical results of any real significance and value. The solitary toilers may not be able to discern any promise of utility in their separate labors. Their particular contribution is only a fraction, after all; and yet, nevertheless, it may prove to be an essential part of a combined whole whose resultant effects may possess practical value of a high order. The efficiency of the methods of physical science and ultimately the application of its results to practical affairs have been increased incalculably through the brilliant speculations in pure mathematics of men who knew not the language of utility. Others, however, are able to combine their results in such a manner as to give a practical turn to considerations primarily theoretical.

The inventor stands at that point of advantage where many lines of discovery converge. The several independent results he is able to unite and embody in a new machine, a new method, or a new process. Many inventions appear as the outcome of collaboration; the co-workers are not always contemporary; the lapse of time alone may serve to efface their memory. Seldom known and less often appreciated, they nevertheless through their patient efforts contribute those essential elements of knowledge without which the inventor's skill would surely fail of success. We are accustomed to think of the inventor as commanding the forces of nature to do his bidding. He, however, is not dealing directly with the forces of nature, but rather with the ideas which other men have formed of these forces, which they have so interpreted that they can be made plain and be put into words and reduced to the expressions of law and formula. The inventor is not merely engaged in the task of fitting part to part of a machine; he builds with rarer material. He is building an idea which is a composite. The elements which enter into its texture are the thoughts of men.

It is to be noticed also that a mind exclusively bent upon the idea of utility necessarily narrows the range of the imagination. For it is the imagination which pictures to the inner eye of the investigator the indefinitely extending sphere of the possible,—that region of hypothesis and explanation, of underlying cause and controlling law. The area of suggestion and experiment is thus pushed beyond the actual field of vision. But, if utility is the sole end of research, the scope of imaginative inquiry is thereby narrowed. There is no comprehensive sweep of the thought, no power of divination, no compelling fancy. Whatever fails to show a face value of utility does not arrest and hold the attention. Significant facts and relations are overlooked. The by-ways of knowledge are left unexplored in the hot pursuit of the immediately useful. But where there is absorbed and sustained interest in an object of research for its own sake, the imagination broods over its tasks with a delight and passion which tend to provoke the hidden truth.

In the prevailing tendency in certain quarters to direct research according to the lead of

utility, there is a vicious theory of education which is being urged to-day with all the enthusiasm of a new gospel: "Teach the child that all knowledge can be disposed to some useful end. Cultivate early the habit of looking for the practical worth of everything that he learns, and let the student of later years bear constantly in mind that knowledge is power." Such is the doctrine of a bread-and-butter theory of pedagogy. But why push the child out into the current which tends to draw every one into its precipitate flow? In this age of materialistic drift, the idea of practical values and utility considerations need not be taught, nor even mentioned. The fact is, it cannot be escaped; its influence is all-pervading, inevitable. While it is undoubtedly true that the student should be interested in the subject which he is pursuing, let us not, however, confuse as some have done the two radically distinct ideas, of an interest in a subject for its own sake, and an interest in the practical utility which it may possess. It is possible, and indeed absolutely essential in my opinion, that the student's interest should be stimulated directly by the

rich material which certain subjects present; and so the thought be withdrawn, to some extent at least, from the exclusive consideration of present or future application of the knowledge which he seeks to the practical affairs of life.

It is true that knowledge is power; but this should not be held out continually to the student as an alluring bait. Knowledge can compel homage and devotion without stooping to offer a bribe, or to cry her wares in the street. There are, moreover, certain indirect uses of knowledge which can never be consciously in the thought of student or teacher during the actual process of instruction. They are too subtle, too far-reaching in their effects, too complex, too cumulative for any one to define and name, and put into the form of a maxim or rule. They cannot be specified and pointed to as the obvious rewards of industry in the pursuit of truth. They constitute not so much the results which knowledge can attain as the atmosphere which knowledge permanently creates—the finer flavor of thought, the sound reason, the true judgment, and the sane appreciation, which are the

marks of a richly stored and accurately trained mind. He who lacks in these particulars fails to realize the full measure of his possibilities. And yet it often happens, strangely enough, that this added power in a man's life is missed simply on account of his restricted interests, and his impatient haste to acquire only that kind of knowledge which may seem to him at the time to be of some obvious use and advantage in the efficient direction of his energies.

This, then, is the paradox of knowledge that he who regards knowledge as his servant is never completely master of it; but whoever regards himself as the servant of knowledge, he alone is master in the world of thought. There can be no higher standard of intellectual attainment, or a more alluring reward of research than that which is expressed by the old Greek author, Isocrates, in his appreciation of Athens and the part which she has played in the history of thought: "So far hath our city passed beyond the rest of men, both in thought and speech, that her disciples are become their teachers; and she hath made the name of the Greeks

seem no longer to be the name of a race, but of knowledge. They rather are to be called Greeks who share our training than they who share our descent."

IV

ON RESPONSIBILITY

THERE is much loose and confused thinking about the nature of responsibility. Not only are there innumerable instances of persons holding positions of trust who are evading evident responsibilities, but also more particularly, of those who would seek to justify themselves in such a course. The latter are like the figures in Nast's famous cartoon of the Tweed Ring, who are all standing in a circle, and each one pointing aside with his thumb to his neighbor as the responsible person. It is the old story of the other man. There are many circumstances in life where it is convenient to shift the responsibility upon some one else; and whenever one sets himself to defend a convenient course of action, he does not always see straight and think clear. Even though he may succeed in convincing himself, nevertheless if in this process there is any element of self-deception, he is perilously near the danger line.

There are no fallacies so subtle as those which insinuate themselves into our reasoning at a time when our interests are involved. To play the rôle of judge and of special pleader at one and the same time is an impossible task. Therefore when we seek to free ourselves from the burden of responsibility in any situation, we must be peculiarly on guard, that we do not allow ourselves to become ensnared in the toils of those artificial distinctions and plausible explanations which when stripped of their verbal dress appear in their nakedness as contemptible subterfuges.

One of these convenient ideas which serve as a kind of natural anæsthetic to conscience is the belief that any responsibility which is divided is thereby lessened. Responsibility, however, can never be dissipated by diffusion. The director of a corporation may content himself with the comforting thought that where many are jointly responsible, his share of the common obligation after all cannot be regarded as very serious. And in this idea there lies a very fundamental error. For responsibility is by its nature something intensive and not extensive. It can be

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divided among many, but it is not thereby diminished in degree. When by the ordinary processes of arithmetical division, however, one number is divided by another, the result is only a small part of the original amount. It is always a lessening process. But the idea of responsibility cannot be expressed in any such quantitative terms. Dividends can be divided into separate parts, but not responsibility. Responsibility can never be conceived in the light of a magnitude. It belongs to the class of things which, when divided, each part is equal to the whole.

Responsibility in this respect is like pleasure which, when shared, is not lessened, but the rather increased, as Bacon long ago pointed out. The same quality, also, we find in the rewards of honor, or of fame it may be, which come to the many who have served in a common cause and rejoice in a common victory. Thus the glory of the whole is each one's share. It can be divided among many without loss. So, also, the appreciation of beauty in nature or in art shows no diminishing returns, although the number who experience the joy of it may be increased with-

out limit. This, also, is the characteristic feature of responsibility. Parents share the responsibility of their children, but the complete responsibility and no half measure of it rests upon each. The director of a bank or an insurance company shares the responsibility of his position with his colleagues on the same board; but the shared responsibility is not a per capitum portion, but the whole.

This is not a new doctrine; it comes to us with an immemorial sanction. But it seems to have been forgotten in recent years. "My share of the responsibility is but slight," is a common phrase which may be heard on all sides at the present day. If one would thus seek to minimize his sense of obligation as regards that which may be placed in his keeping as a trust, he should not forget that his share of responsibility is not a part, but the whole, undiminished and untransferable. He may have others associated with him, it is true, but his individual responsibility cannot be shifted upon them. He must meet it in the full rigor of its demands, and regard himself as though alone in the discharge of his duties.

There is also the fallacy of the delegated responsibility. It is impossible for one at the head of large business interests, for instance, to give his personal attention to every minute detail. He finds himself naturally compelled to delegate much of the work of supervision and of administration to others who act in the capacity of his deputies. Otherwise the business of life would be impossible. This is indeed a commonplace of every-day business routine. But because some one else may assume the responsibility, he who deputizes it is not wholly relieved of it. He passes on the duty of actually performing some specific work, and yet the obligation still rests with him not to do the task, it is true, but at least to see that it is done. We cannot afford to ignore the common-law judgment hat the act of the agent is the act of the principal. We cannot take it for granted that the mere transfer of responsibility to another assures a satisfactory discharge of all the duties which it involves. We do not dare to shut our eyes to the fact as to whether such duties are fulfilled or not, on the ground that the responsibility now rests upon

another and not upon ourselves. It is his responsibility, but it is also ours. A person who is at the head of a large business enterprise cannot be omnipresent or omniscient; but he is responsible for the kind of men who are his partners in responsibility, and also for the atmosphere which pervades his business, for the general morale of the service, for the discipline that is enforced, for the prevailing policy and method pursued, and for the spirit and tone which characterize all departments, however various they may be. Division of labor is not a dissipation of responsibility. He who is responsible for a particular task is relieved of that responsibility only when there is evidence that the given work has been done. The head of a corporation should devise certain methods by which such evidence can be regularly forthcoming, so that when any cog in any wheel may chance to slip, the fact may be at once apparent at the central seat of responsibility.

There is, of course, such a thing as a serial responsibility, as I would style it, that is, where a number of persons in turn assume the re-

sponsibility for a certain task, each contributing his share to its accomplishment, and then pass on the full responsibility to some other. This is illustrated in the sending of a registered package. Each one in the series does his part in the process of forwarding it, and receives a signed acknowledgment that another has relieved him of his particular duty and of all responsibility connected with it. The ordinary business of life, however, cannot always be so nicely adjusted. Responsibility appears more often in an indefinite and diffused form, in which many persons are involved, and no one at any time carries the full burden alone. There is no way of escaping responsibility of this kind as long as we remain within the area of its pervading power. We dare not hang about the outer edge of this region, hoping to reap the possible rewards, and yet think to evade all blame or loss in the event of untoward results. There are many who thus endeavor to hold their course along some such imaginary line, so that they may shrewdly keep within it to share the honor or dividends which may accrue, and yet be able to swerve to the outer

side of it whenever the area within may become the storm-centre of indignant protest and recrimination.

Again it is often urged that we are in a measure relieved of the responsibility of an act, when such an act is a customary procedure in the business, professional, or social circles in which we may happen to move. "Everybody does it," it is said, "it is the usual practice; then why should I be overscrupulous concerning that which general usage has sanctioned as permissible?" Such is the argument. And yet responsibility at the last analysis must be recognized as an individual matter. No man's responsibility can be judged in the light of another's. Custom does not make right. The low level which the morale of a guild or of a profession sometimes reaches is due to this very fact, that no individual sees his peculiar responsibility in such a light that he is willing to break the bond of custom by protest or by practice. It is not easy to be independent under such circumstances, but that does not make it any the less imperative. Responsibility is not lessened merely because it may

entail extraordinary courage and sacrifice. We do not justify ourselves in the failure to meet evident obligations by the plea that circumstances and conditions are too much for us to cope with. The convenient, the comfortable, and the easy-going are not the symptoms which usually form the diagnosis of responsibility.

There is another fallacy which many fall into of securing freedom from responsibility by the assumption of a convenient ignorance. A candidate, for instance, may not choose to know the detail of method and of policy pursued by a campaign committee in charge of his interests. The members of the committee in turn deem it wise to have him kept in ignorance. It is generally understood that whatever happens, he is to know nothing about it. The comforting theory is that no responsibility can attach to a person concerning an act of which he is ignorant. This is doubtless true, provided he is not purposely ignorant. A person may not be held responsible for failure to see some obvious circumstance when his eyes are shut; but he is responsible for his eyes being shut when they ought to be open.

There are men who know that certain results cannot possibly be accomplished without certain definite means being used, and yet consent weakly to profit by these results on the ground that they do not know explicitly the character of the means used to attain them. It is a lame excuse. We are responsible not only for that which we see and hear, but also for that which may be implied in the things seen and heard, and which we are compelled to recognize as the necessary consequence of them. It is not merely the actual situation in which we find ourselves, but also the logic of such situations that must be interpreted and judged by us as to the measure of our responsibility for them. It must be remembered that the very ground of our responsibility is the presupposition that we are in complete possession of our reason. How absurd therefore to narrow the range of responsibility by excluding the obvious inferences which the reason of any man of ordinary intelligence must surely recognize. If a campaign committee, for instance, expends large sums of money, it stands to reason that the one in whose interests it has been raised must know that

revenues are not created by magic. Merely to choose not to know is to ignore a definite responsibility and thereby assume an indefinite one. It is like signing a blank check to an unknown order and for an unknown amount. The man who would rather not know what his friends are doing in his behalf should be held to strict account for his voluntary ignorance. No one can afford to have things done for him which he would scorn to do or be afraid to do himself.

There is also a very common feeling that any one may repudiate all responsibility in a given situation, if he will only declare forcibly and loudly enough that he does not regard himself as in the least responsible for the same. He may insist that he will wash his hands of the whole matter; but there are certain stains that cannot be thus removed. The hands may be washed; but they may not be made clean by the process. There is a ceremonial purity which does not penetrate beneath the surface. How often men justify themselves, when feebly yielding to the prevailing opinion of the many associated with them in some position of

trust, by the ready excuse that after all the majority must rule. It is true that the majority must rule; but it is equally true that the minority often must fight. A mere verbal protest followed by a quiet acquiescence is not sufficient when honor or honesty is the issue. An uncompromising attitude of opposition may have to be maintained until the court of last appeal is reached; that court may be a board of directors, or the stockholders, or public opinion, or in the regular course of legal procedure even the Supreme Court of the United States itself. Responsibility often demands a fight to the finish. In that case, compromise is cowardly.

We are responsible for our silence, for our inertia, for our ignorance, for our indifference—in short, for all those negative qualities which commonly constitute the "dummy" directors—those inconsequent personages who would enjoy the honor and the perquisites of their office without allowing themselves to be unduly burdened with its duties and cares. The president of a corporation or a superintendent does not assume the responsibility vested in its board of directors; he merely represents that responsibility. And

when they would implicitly assign all sense of their personal obligations to his keeping, they not only put themselves in a position to be easily fooled, but actually offer a ready temptation to him to fool them. They are thus doubly reprehensible; for the neglect of duty on the one hand, and on the other for extending a virtual invitation for some one to use them as tools for unlawful ends. Not only the wreck of a business, but the wreck of a human being must be laid at their door, who by a splendid capacity for negligence do thus expose another to the play of the most subtle temptations which can be conceived.

There is also the mistaken notion that we may escape certain responsibilities simply by not assuming them. There are some obligations, however, which we do not dare to refuse, and which indeed it is not possible to refuse. We have no choice in the matter. We cannot say in truth that we have no responsibility, for instance, for the general decency and good order of the community in which we live merely because we have chosen to keep out of the village politics, and therefore, not being on the bor-

ough council or the board of health, it is none of our business if the laws of nature, of man, or of God are violated. It must be remembered that responsibilities of such a kind are not assumed by definite choice, but belong to us whether we will or not. Certain responsibilities we do not choose; they choose us. If at times they seem to us vague and indefinite, it becomes our duty to make them definite through some effort on our part. We are held to account not merely for doing the obvious duty that circumstance may urge upon us, but also for creating the circumstance which may give rise to a wholly new set of duties. We are not only responsible for lending our service to the cause which has a rightful claim upon us, but also we may be responsible for the establishment of a cause to serve. We are responsible for the very fact, if indeed it be a fact, that our responsibilities in life are so few and so slight. If we choose to carry the lighter burden, it is not a matter of felicitation, but one for our most serious personal concern; for an irresponsible person is always defective in some respect, either in body, mind or character.

There are those moreover who imagine that in certain relations of life there can be devised some natural substitute for the sense of responsibility. It is possible, of course, to establish a set of automatic checks upon an employee's activities of such a nature as to reduce his personal responsibility to a minimum. Any failure in the performance of his duties is at once mechanically discovered by the various systems of time-clocks, bell-punches, cash registers, and the like. This is very well in all cases where the labor is that of simple routine. Mechanical activity can be checked by a mechanical device. Not so, however, as regards those duties which demand a higher order of capacity—such as that of sound judgment, a fine sense of discrimination, and the power of resourceful initiative. In all such matters there can be no substitute for the responsible personality. Man is a responsible being because of this very element of free activity in his nature which no mechanical contrivance, however ingenious, can ever gauge. We are all so completely dependent upon the integrity, fidelity, and efficiency of our fellow-men in the more complex relations of

life that we must at times, and often the most critical, trust them implicitly. We do not proceed far in any undertaking without being aware that we are holding another responsible, or that some one is holding us responsible for those inevitable duties which arise out of the relations of man to man the world over. If a man would escape all responsibility he must place himself wholly outside of the relations of life, for life is responsibility. As we have seen, responsibility remains with us even though we may ask others to assume it; we share it with others, but our portion is the same; when we turn our backs upon it, we find it still facing us; we flee from it, and however far it may be, we behold it waiting for us at the journey's end.

V

THE WHOLE AND THE PART

THERE is a common fallacy which is due to a misapprehension of that familiar axiom, "the whole equals the sum of its parts." We imagine that this is true in every sphere of experience, but it is not. If our thought is concerned with magnitude, lines, or surfaces, and if it is a matter of indifference as to the order in which one relates the separate parts, then the simple axiom holds; but otherwise we run into all kinds of error and absurdities. A watch ceases to be a watch when you have merely the separate parts before you. The sum of them will not mark the minutes and hours. The collection of parts is not the watch. For no chance arrangement of parts can produce a mechanism; it is not the sum, but the ordered connection of the parts which makes the watch, the engine, or the machine. And, in the case of an organism whose parts are held together and co-ordinated by the mysterious bond of life, can we say the whole is equal

to the sum of its parts? Try the experiment; analyze the plant, dissect the animal, and then essay a summation of the parts. We soon discover that it is an irreversible process. Either dissection kills that which it investigates, or that which it investigates is dead already. A living whole is never discovered by a mere putting together of its parts. Goethe long ago exposed this folly:

"Wer will was Lebendigs erkennen und beschreiben
Sucht erst den Geist heraus zu treiben,
Dann hat er die Theile in seiner Hand,
Fehlt, leider! nur das geistige Band."

The end of all knowledge is the discovery of this "vital bond," the grasping in a multiplicity of details the one idea which is the living principle of their connection. The discovery of facts which are not yet put together to form a whole is not knowledge. It is preliminary to knowledge; but to know means to interpret the accumulated facts, and to interpret them is to relate them to some significant whole. There are many to-day who insist that the investigator in the natural sciences, in political

economy, in psychology, should be solely a compiler of facts, and that the man of theory should give way before the man of facts; for the fact is certain, the theory is uncertain, the fact is born of reality, the theory is spun out of mind. But every fact, it must be remembered, illustrates some theory, of which it is a particular instance. To understand a fact, there must be an appreciation of its relation to the universal truth which it reveals, and with which it is united by its unseen but "vital bond." The isolated fact, indeed, apart from its setting, has no meaning. The hand severed from the body is no longer a hand. The brain in the jar of alcohol is not a brain; it was once the centre of thought and feeling; it is now only a specimen; as a part of the organism it was everything, as a whole in itself it is nothing. Much exact scholarship gains the letter but loses the spirit of knowledge, because, while collecting the facts, it fails to comprehend how they hang together, or what they mean in the light of a larger whole.

On the other hand, if one part, however insignificant, be rightly interpreted, it will dis-

cover the whole. One drop in the test-tube, a single act of disloyalty in a friend, a glance of the eye, a gesture, a word too much or a word too little, and the whole story is told. The astronomer only needs to see how the arc begins to round in order to construct the complete orbit. The theory of reasoning rests upon this simple principle, that things are so bound together that a part may disclose the whole, as, when one picks up a single link, the entire chain comes with it. The prophet, for instance, is not one who in some mysterious manner sees into the future. It is the present into which the eyes of the seer must penetrate. He predicts the future only so far as it is wrapped up in the present. As Leibniz once said, "Every present is big with the future and laden with the past." The veil is not between us and the future; it is between us and the present. We, dull of vision, fail to read the signs of the times. The parts we see, but we are not able to divine the whole.

So also in any group of men, in a clan, a tribe, a society, in church or in state, the whole is more than the sum of its parts. The parts

may be seen, they may be counted. We find them in registers, in rosters, in tables of census statistics, and yet the communal spirit which makes for unity and solidarity is unseen. It is the *esprit de corps*, without which the body dies and returns to its elemental parts. And, even within the still larger range which embraces the circle of mankind in general, the several parts are bound together as members one of another, because they are united in a common ancestry and a common destiny, a common weal or woe. The spirit of humanity makes all one.

It has often been said that the great man, the genius or the hero, lifts himself above the ordinary level of mankind, and that he in no sense belongs to the mass, but is as one dwelling apart, self-sufficient, fulfilling the law of his own being. But the great man, if truly great, belongs in a peculiar manner to his day and generation; if not, there is no arena wherein his powers may find a natural manifestation. No man attains a place in the world's history save through the part which he plays among his contemporaries and in his own setting. He must have the great heart and the

great mind himself, and yet his following must, in some measure at least, possess the elements of greatness. No general could ever prove his greatness with a battalion of cowards. The great prophet must gather about him those who have not bowed the knee to Baal; or who would hear his message? Luther had the Protestants, Cromwell the Puritans, Napoleon his Imperial Guard, Washington the American patriots. The scholar writes for scholars; the man of letters for those who possess the responsive mind and taste. Behind the great masters of English there has ever been that great body of their fellows who

> "Speak the tongue
> That Shakespeare spake; the faith and morals hold
> Which Milton held."

There is still another fallacy which may be called the genetic fallacy—the mistaken idea that, if we can only trace a thing back to the part which forms its origin, we shall there, in that initial stage, find its complete explanation. This is the day in which the method of evolution prevails throughout every field of serious

investigation. Back to beginnings! This is the cry on all sides, whether the investigation be that of an animal, of a religion, or of a form of government. The original part, it is urged, is the key to all subsequent processes of development. But the original part by itself is never self-illuminating. Even though in our researches we have succeeded in discovering it, we are at a loss to interpret its significance. For much appears in any initial stage which, in the process of development, completely disappears; and much lies concealed which, nevertheless, contains the promise and potency of all that is to be. It is of the nature of a cause to hide itself. In this respect it resembles the Deity—because it too is creative. The complete nature of a cause can be revealed only through the whole course of the process of development which proceeds from it. If every cause manifested itself fully in its earlier stages, then all knowledge would be attained by simple observation, and it would be superficial at that; but it is not. You may ask, what is the nature of the seed which I chance to hold in my hand? I do not know; but I can

discover it readily enough. Sow the seed in the earth, let it be warmed by the sun and wet by the rain, let it grow in the light and in the night, then will come a revelation of its nature in fruit and flower. The seed does not explain the plant; rather the plant explains the seed.

No more is man satisfied with that account of his nature which refers him to his mere beginnings, and traces his line of descent to certain "Simian ancestors of arboreal habit"; or, to go a stage further in this regress, to the primal elements to which his organism may be reduced, the oxygen, nitrogen, hydrogen, carbon, and what not, of his ultimate origin. Is man, as we know him, as we know ourselves, satisfactorily explained by such beginnings? It must not be overlooked that, in that elemental stage, there must have been a potential factor which is not in any one of the original parts but pervades them all, which elevates the dust whence man comes and hallows it, which transforms the beast into the savage and the savage into the civilized man. Call it reason, or spirit, or soul, what you will; it will never be revealed at the beginnings of the process of evo-

lution, but at its consummation. Explanation does not look backward to origins, but forward to the final results of the unfolding process. The process of development is a process of revelation, but its beginnings always conceal more than they reveal. We must all concede what Darwin pointedly calls to our attention, as though in our pride we needed constantly to be reminded of it, that "man still bears in his bodily frame the indelible stamp of his lowly origin." Although we may have come from a stock which we share in common with the ape, nevertheless we have come a long way; and although we have risen from the dust of the earth, and to that dust we return, yet the significant fact remains, that we *have risen*, and that for the brief space at least while thought holds sway over our lives we decline to be confused with this dust under our feet, or with the animal which follows to heel, or which mimics our bodily movements and gestures as he chatters to us from his cage.

Mr. Spencer finds the origin of religion in the early superstition of primitive man, the belief in ghosts, the disembodied spirits of heroes, feared,

reverenced, and finally worshipped, appeased by sacrifice, praised in song, in dance, and prayer. But, here again, religion also is to be judged not by what it once was, but by what it has become and by what it promises to be. The early superstition does not explain the evolution of the religious idea in its long course of development through the ages, but the evolution of religion is rather the development of purer forms out of earlier perverted forms; it is the dying of superstition as the seed dies in the earth, generating that which is potentially in it, separating the essential from the unessential, the true from the false, a revelation of the inner significance behind the symbols of religion, of the inner spirit behind its external forms.

When we trace the course of any series of events backward to their starting-point, we unconsciously interpret the initial stage in the light of all we have gathered by the way in our return to it, and thus we are apt to attribute to the first term of a series a significance which is not its own. As in a mathematical series, so in any series of events, the first term has no meaning whatsoever unless we know also the

law of the series, how the subsequent terms are related to the first and to each other in the manner of their formation. For this reason, we say that no history can be written by a contemporary. The current events show their surface significance only. That which is wrapped up in them will be revealed in time, and he alone who can read the course of their subsequent development is qualified to judge them critically.

There is another error of judgment to which we are all liable; it is the fallacy of the half truth. This is a substitution of a part for the whole, and resting satisfied with it because it is thought to be the whole. Such a satisfaction proceeds usually from self-deception. It signifies a false mental attitude; and the disastrous consequence of such a deception is this, that one is content with a fancied attainment when he should be restless with the fever of the chase. The disaster imminent in such a situation is not merely that the half truth is substituted for the whole, but that further inquiry is suspended, and that which should be a transition stage on the way of knowledge is

complacently regarded as the journey's end. Thus we have partisanship in politics, bigotry in religion, the orthodoxy which regards every differing opinion as heterodoxy, the idealism that is unreal, and the realism which discovers no ideal, the egoism which recognizes no other, and the altruism which dissipates itself in service of others at the expense of the obligation owing to self. How easily we overlook that fundamental law both of knowledge and of life, the law of complementary adjustment, the fitting of the half truth to its other half, so that a balanced whole is the result. We gaze so obstinately at the one side of the shield that a shifting of the point of view never suggests itself. "The tragedy of thought," says Hegel, "is not the conflict of truth with error, but of truth with truth."

How, then, is one to know that the whole truth which he thinks he possesses is but the half truth and not really the whole? Such a discovery comes only to him who has an open mind and a spirit of tolerance. The open mind is ever seeking a new point of view; the tolerant spirit is ever striving to put itsef in a sympa-

thetic attitude to opposing opinions, and this not after the manner of a weak concession, but in the interests of a critical inquiry after truth. For suppose, upon a candid examination of an opinion which is opposed to the one we hold, we find something which we are constrained to acknowledge as true, then are we not warranted in concluding that it is the very portion of truth which our opinion lacks and which is its natural complement? The adjustment of the one to the other must surely lead us to a deeper appreciation of the truth in its entirety. All progress in knowledge has been brought about by some such process as this—a series of successive adjustments arising out of conflicting opinions. How many controversies in religion, in politics, or in philosophy have resulted in the revelation of a larger truth than either side alone had maintained. The moment any controversy appears to be so one-sided that the truth is wholly with the one and error is wholly with the other, our interest in it immediately ceases. It is in clash of opinion that truth is provoked; and it may well happen that the one who traverses our convictions may be not so much an an-

tagonist as a collaborator in the field of research.

Moreover in a philosophy of life which is calculated to produce any deep and permanent satisfaction, one must learn to see things as a whole, and not in the isolation of their detached parts. Life has many compensations which the whole story reveals, but which the separate incidents here and there not only tend to conceal but actually to contradict. It is only when the case is all in that a true verdict is possible. Then it is that we come to see that things which are different need not be necessarily opposed. When immediate observation fails to disclose the complementary part, we grow impatient, and although resolute in action we nevertheless become cynical in spirit. It is well to remember, however, that it is only in the long run that events begin to shape themselves into a connected whole, and the experiences of life show an emerging harmony and unity. But in the processes of the long run our staying powers are put to a sore test. We demand an immediate demonstration of the end in the beginning, of the whole in the part. In

developing the full round of truth, however, the time element must be reckoned with, and we dare not overlook its supreme significance. Weary with waiting, we often magnify a partial truth out of all proportion, and seek to build upon its foundations in fancied security and confidence; or else the same partial truth we repudiate altogether as wholly false merely because without the maturing and tempering of time it seems inadequate, unsatisfying, impossible. The laws of logic as well as the natural dictates of common-sense demand a deliberation of judgment which will refuse to accept a plausible truth too readily, or to discard too summarily that which may appear at the first glance false and unprofitable. There is a balance of mind which wisely avoids these extremes, seeking the truth in patience, testing the old and tolerant of the new.

It was Spinoza who insisted that life must be viewed as regards its deeper problems *sub specie æternitatis*. And what Spinoza had in mind was simply this, that the missing part which serves to make whole the scattered fragments can never be adequately supplied in the mere

course of human events and the round of years; but that something which transcends the happenings of time must find a place in our philosophy of life. The transitory is not self-explanatory, nor indeed can be. Its significance is disclosed only in the eternal complement which completes the broken parts. In this sense every truth concerning human affairs and human destiny is partial, and awaits the great revelation.

VI

THE GOSPEL OF MIGHT

THE philosophy of Nietzsche is the proclamation of a new gospel—not the redemption of man, but his extinction. Man as a species is to be displaced by a new order of creature, the *superman* which is to be. Nietzsche's philosophy is a diatribe against all existing social conditions and conventions which tend to perpetuate the race of mankind. Man as we find him to-day is a conspicuous failure. He can develop nothing better along the old lines. There must be a new type. And this new type of man is to be characterized by complete freedom from the limitations of duty either to his race or to his God. This superior representative of humanity is to be made possible by removing this greatest of all obstacles to human progress, namely, the ordinary considerations of morality. Morality paralyzes the spontaneity of nature; therefore man's impulsive powers should not be restrained by any

uncomfortable burden of obligation and responsibility. The activity of the superman must find its free and natural scope in a sphere which lies far "beyond good and evil."

Nietzsche recognizes but one virtue, that of strength; but one vice, that of weakness. Happiness he defines as the feeling that power is increasing, that resistance is being overcome. The sole pleasure in life is the ecstasy of an overcharged and surging will. The compelling motive to activity is not the will to live, as Schopenhauer so persistently urged, but rather the will for power, the will to prevail and to dominate. Nietzsche declares, moreover, that life gives no such thing as true contentment; for power is insatiate and always reaches forth to secure more power. Man's spirit is restless if it is not consciously growing in strength and progressing in power. Therefore, it is of the very nature of man to surpass himself. Instead of the gospel of love there is the gospel of might; instead of the spirit of obedience there is the cry of protest; instead of the grace of humility there is the arrogance of pride; instead of self-sacrifice, self-assertion; instead of the kindly

offices of sympathy, the grim struggle for pre-eminence; instead of the recognition of man as a brother there is the determination to treat him either as a foe or a tool to further selfish ends.

Of all the virtues to fall under Nietzsche's condemnation, that of sympathy receives his most stinging scorn. He insists that this weak sentiment of sympathy has always been and always will be an obstructive force in the normal development of humanity; for sympathy, he declares, is not only a waste of strength, but it serves at the same time to divert the natural energies of human effort into channels which are economically unproductive and socially disorganizing. According to this prophet of the "new dawn," it is exceedingly significant that "vigorous eras, noble civilizations, see something contemptible in sympathy, in 'brotherly love,' in the lack of self-assertion and of self-reliance."

Moreover, in the new era which he heralds Nietzsche maintains that the natural law of survival must be given full and unobstructed play. Instead of the complex machinery of hospitals and asylums whose particular offices are the

arrest of the forces of nature in cases of impaired constitutions and chronic maladies, there should be given to these forces free course in sifting the strong from the weak. The skill of the physician should be devoted to the conservation of the superior types of humanity on the one hand, and on the other to the art of relieving society of its hampering burdens through the stern but eminently humane processes of euthanasia. The limits of the development of the race have been reached for the very reason that the fundamental law of development, the struggle for existence and the survival of the fittest, has been neutralized by the weak affections of pity and of kindness.

The distances which separate men from their fellows must be emphasized. To make men equal is to reduce them all to the dead level of mediocrity. The pious effort to elevate the masses is as contrary to nature as it is futile, and futile for the very reason that it is contrary to nature. Develop a few strong types; let all else be sacrificed to that end.

In Nietzsche's code the morality of duty, of self-sacrifice, of sympathetic consideration is

the morality for slaves; for the man of noble breed and noble destiny there must be a complete emancipation from the trammels of moral compulsion. His impulses should be unrestrained, his purposes unconfined. He must be free, free as the beast that ranges the forest for his prey, as unconcerned, as undisturbed by any sentiment of pity or of fear, as disdainfully indifferent to the cry of pain and the impulse of mercy. Thus the great man, great in power and in possibility, competent and self-sufficient, worthy to be the progenitor of the race of superman, or to become the superman himself, shall know no law, but shall be a law unto himself. He shall be under no compulsion save to strive for the pre-eminence to which nature has ordained him. For him other men, other lives are means to develop his powers and manifest his glory. Such a being is a "transition and a destruction." "There is ice in his laughter." "He is hungry, violent, lonely, godless; thus the lion's will willeth itself. His is the courage of hermits and eagles. He seeth the abyss, but with pride. He seeth the abyss, but with eagle's eyes; he

graspeth the abyss with eagle's claws; such is his courage."

Thus Nietzsche describes the lion and the eagle in man, that wild instinct of power which morality has tamed and the conventions of life have degraded to the ineffectual modes of propriety and custom. According to his creed it is better to be a brute than an ordinary man, doomed to dulness. It is better to cherish and develop our brute inheritance than to be steeped in the dreary commonplaces of morality.

Who is my neighbor? Nietzsche answers, "Your work is your neighbor." And he adds that the man who loves his neighbor as himself must have an exceedingly poor opinion of himself. The most imperative need of the age, therefore, is a "transvaluation of all values"; that is, the kind of conduct and of character to which mankind has mistakenly attached value and indeed supreme value, must be superseded by new standards, by new customs and traditions. The value emphasis must be placed upon those very qualities of temperament and disposition which the teaching and practice of

the centuries have summoned man to suppress and to beat down under foot. It is not merely that "time makes ancient good uncouth," but that the very idea of what is good has been and is fundamentally abnormal and grotesque—contrary to the entire economy of the universe, wherever that economy has not been perverted by the artificial conditions created by man. Human nature has been corroded by "moralic acid," as this iconoclast of virtue strikingly puts it.

In this code of new values, power alone is virtue; the will to win, and to win at all costs, the only disposition worthy of praise and emulation. The measure of success will then be the sole standard of conduct. Whatever prospers will be proved right; whatever fails, wrong. What one can do will be the only limit of what he may do. The supreme obligation of life will be the duty to forget that there is any such thing as obligation.

The Dionysian view of life which Nietzsche so eloquently advocates—the free play of fancy and feeling, delight in the joy of living, following the lead of the impulsive will—this appeals to many in our day particularly who crave an

unrestrained freedom to be and to do and to get whatever the wild impulse of nature may suggest. They would not express their philosophy of life quite as crudely and as nakedly as this prophet of the superman. They would shrink possibly from acknowledging even to themselves their repudiation of the customary morality of their day; nevertheless they order their lives after the manner of privileged characters who have done with the old-fashioned idea of duty and its claims upon them. They are not of the herd, and they do not propose to be handicapped by the petty obligations which the common run of mankind must assume. They believe that somehow success carries with it a charter of freedom, if not of license; and that a moral code can be made to order, peculiarly adapted to the needs and purposes of the individual after the manner of all his other possessions.

It is indeed a very common opinion that the man of genius is exempt from the criticism naturally attaching to the moral delinquencies of the ordinary person. He is not like other men, and therefore his extraordinary powers

entitle him to extraordinary consideration. If a man's public life merit praise and fame, his private life, which may deserve in itself public censure, should nevertheless be relegated to the shadows of silence. The greatness of the person sanctions the cha acter of his pursuits and pleasures. From such a point of view, attainment covers a multitude of sins. It is of course very convenient at times to defend in the rubrics of a philosophical cult certain actions which an old-fashioned view of things would unhesitatingly pronounce wrong and unworthy.

The fundamental fallacy in the gospel of Nietzsche and the fallacy in the creed of his following, whether called by his name or not, is this, that, while willing to sacrifice everything for the sake of power, they overlook the significant fact that the stability of power may depend upon those very elements which are sacrificed in order to secure it. Power may be bought at too dear a price, particularly if we rob ourselves to pay for it. The power which man merely acquires externally, and which he may use as an instrument or as a weapon, may leave the man himself all the weaker for its

possession. The power which is detached from the strength of personality and in no sense represents the man is the kind of power which will be used irresponsibly and in all probability disastrously. Whenever there is power which is gained in defiance of the clear distinctions of right and wrong, power breeding power without let, the character is left defenceless under the stress of storm, when the strength of the person rather than the power of his possessions is tested. Of what avail is it if one is strong merely in what he has, but weak in what he is? The crucial tests of life measure the man himself—and not that which merely pertains to him.

Power shines in its glory only when it is tempered by wisdom and reverence. Stript of its moral setting and support, it begets the lust of power, and the lust of power develops the brute in man. We admire the brute in the brute, but not the brute in man; for then the man dies that the brute may live. Man may possess the light of reason, but how often, as Mephistopheles says:

> "Er braucht's allein
> Nur thierischer als jedes Thier zu seyn."

I do not believe that there can ever be evolved a higher type of being, that myth of the fancy —the superman, by fostering the lowest that is in our present race and ignoring the highest. Nor do I believe that the line of human progress is to return upon itself and draw back to the elemental instincts and appetites of the wild beast whose right is his might, whose desire is its own sanction. The power that is bred of impulse, that is developed without the labor of sacrifice and discipline, that knows no law of justice or of honor, that is faithless to friend and cruel to foe, such power creates in itself the forces which make for its own disintegration and destruction.

When one is overpowered with the consciousness that he belongs to a superior order of being, superior by virtue of his mental endowment, his possessions or his position, that person is doomed. No enemy without is so great a menace as this foe within. He may fear no foe; but his danger lies in the fact that he does not fear himself. There is always a subtle undermining of power in the idea which one may cherish that fate has elevated him above

his fellows in order that they may serve his purposes, enhance his fame, and minister to his vanity. For while he may look down upon them in arrogant pride, sensitive to their applause, but disdaining their touch, and while he may hold his head high above the level of the crowd, nevertheless that man stands upon feet of clay. Nietzsche expresses the desire that he may be a light to men, not to lead them but to blind them. Such a light burns inward as a fire, consuming its own sources. It is characteristic of the small man to make others aware of their insignificance. But it is the glory of the great man to render others conscious of the possibility at least of their own greatness. In contact with his personality power is imparted by a subtle process of moral induction.

Put to the only test which could possibly have any significance whatsoever for Nietzsche himself, namely, the test of survival and permanency, the power which he extols is seen to fall of its own weight. It is self-destructive. It overreaches itself and cannot hold what it would grasp, nor can it sustain itself in the heights to which it fain would rise. The power

which is subversive of the moral order of the world, which operates in disregard of the common rights of man and in defiance of the laws of God, which erupts in tyranny and oppression, such power does not tend to produce a new order of being, representing a more perfect type of humanity, or shall we say superhumanity.

If the superman is to live his life "beyond good and evil," he will surely not live long. His fellow-supermen will claim a like immunity from moral restraint; they too will be driven by the greed of gain and the lust of power; they too will be without bowels of mercy, implacable, relentless, knowing how to hate and to destroy. The possibility of the goodly company of supermen, of the Nietzschean breed, is one which the imagination may well dwell upon with rewarding amusement, if not with profit.

I do not believe that it is possible to develop a race in the lines of progress, or to evolve a wholly new race by creating conditions of extreme individualism, and causing them to prevail. If the individual is to be improved through the sacrifice of the many, the deterioration of the

many will inevitably react upon the individual, menacing his attainment and limiting his progress. The Burbank blackberry or plum may be propagated by a process of destroying thousands of plants that one may flourish and become the progenitor of a new species. Man, however, is bound to man by different ties. The human species is not represented by the individual as such, regarded solely in the light of his individuality. For the mere individual is not wholly a man. The man is essentially a being whom to know aright and to appreciate at his full significance is to know in the light of the relations which he sustains to his fellows. The real man is the man in his human setting. The detached person whether isolated voluntarily as the hermit, or involuntarily as the exile, is so far forth less a man. And the same is true in the case where the isolation is effected through the pride of that superior power which delights in emphasizing the distance between man and man. Nietzsche hates above all things the spirit of democracy. He abhors the masses, their murmurings and complaints, their cheap pleasures, their vulgar ills and needs. Let the

great man, he would insist, free himself from the crowd, proving his superiority and proclaiming his disdain.

It might be well to ask, however, who are the great men of the world, as the world counts greatness?

They are the men who in their greatness are in some measure representative. They are not a spectacle for others to admire or to fear. They are in one way and another the champions of the cause of humanity. Their power becomes a part of the vigor of the social group of which they are members. They are the mind to think, the voice to speak, and the strong arm to act for their moral constituency.

Throughout the records of history the supreme manifestations of power have been the instances of concerted action where the individual feels himself one with his comrades, where shoulder touches shoulder in the fight, and the distinction of the leader is merged in the glory and the claims of his cause. The great man always and everywhere is he who is consecrated to a cause which is greater than himself. The spirit of loyalty tempers his

power; makes him wise, just, self-governed. But the spirit of loyalty cannot exist and flourish in a nature which has no reverence for anything higher than itself. The old mythology had a solid basis of truth in its belief that Zeus fearing that the entire race of mankind should be exterminated came to their rescue, bringing with him reverence and justice, to be the law of conduct, the bond of friendship, and the stability of the communal life.

The doctrines of Nietzsche have a wholly opposite trend, creating a caste spirit of the extreme sort, driving the wedge between master and man everywhere. In the midst of the democratic institutions of our modern life, he would constitute a mediæval feudalism wherein the mere good pleasure of the over-lord is law to the serf. He would start centrifugal forces at work in society which separate man from man, and destroy the organic centres of stability,—the home, the church, and the state. He would concentrate power and wealth in an oligarchy of superior creatures who know no law but that of their own convenience and security. Nietzsche overlooks the fact, or else

in his irresponsible vagaries he ignores it, that human power is of slight avail if the only machinery to which it can be applied is hopelessly out of gear.

Nietzsche's message to his age he puts into the mouth of the mythical personage, Zarathustra, who moves among men but is not of them, who speaks as an oracle, herald of the superman, "strong as the morning sun coming from dark mountains," prophet of the new day and the "great noon." His is a mirthless laughter, a cynical joy, a wild wisdom. His happiness is in the terror of the spirit. "Free from the happiness of slaves, saved from God and adorations, fearless and fear-inspiring, great and lonely," such is Zarathustra, Nietzsche's ideal of the hope of mankind, the ideal which he felt that he himself had in some measure realized. Zarathustra comes into the market-place from the wilderness and mountains; his message is delivered and to the mountains and wilderness he returns. He judges the life of man as one having no part in it. His judgment is condemnation. He passes through the world as a storm moves over fair fields; in its wake, dis-

may and destruction. For the world's joy, Zarathustra has only a sneer; for its sorrows, scorn; for its frailty, ridicule; for its achievement, contempt; for its hope, a curse. If this is the prophet of the new era, what will its messiah be? Who will restore when all is destroyed?

I do not believe in a new world which is essentially of such a nature that it can be evolved only out of the ashes of the old. If the continuity of the past is to be wholly broken, if all history is to be wiped out, if the old order is to be completely destroyed, what pledge have we of the new? "One must have chaos within to enable him to give birth to a dancing star." "Thus spake Zarathustra." Beneath all figure and epigram, however, there is this fundamental idea of Nietzsche's philosophy of life—that in the old order there is nothing worthy of conservation to form the beginnings of the new. "O my brethren," says Zarathustra, "not backwards shall your nobility gaze, but forward! Expelled ye shall be from all fathers' and forefathers' lands! Your children's land ye shall love (be this love your new nobility) the land

undiscovered, in the remotest sea! For it I bid your sails seek and seek! In your children ye shall make amends for being your father's children. Thus ye shall redeem all that is past!" I must confess that I do not see how the expectation of a new world can be rationally justified if the past must be acknowledged a complete and dismal failure. He who despises the past should be naturally sceptical of the future. Any philosophy of life is under suspicion which seeks to destroy and not fulfil the promise of the years that are gone, and which does not build upon the foundation of human nature as it has proved itself to be, but rather upon that which with wild fatuity we may wish it to become.

If we are to look forward to a new heaven and a new earth—a universe without God and without man, where the Zarathustrian race shall flourish, then as this great cosmic drama is being enacted, set to the wild strains of the Dionysian chorus, an inevitable question will arise, Is this a comedy or a tragedy?

VII

THE DIALECTIC IMAGINATION

IT is no doubt natural, to associate the play of the imagination exclusively with the artistic temperament, and to think that it has no place in the experience of one who is immersed in the busy affairs of life and is brought into daily contact with plain facts and prosaic situations. On the contrary, however, there is a very important function which the imagination performs in the more sober processes of reason as well as in the flights of fancy. In matters of sentiment, of feeling, of taste, the imagination appears at play. In the offices of reason it serves quite a different function. It is there the imagination at work. It is the efficient imagination. The phrase, the dialectic imagination, will express this peculiar function —that of facilitating the work of the reason in the effort to solve the matter-of-fact problems of life. It is a function which is essentially logical.

This is the kind of imagination which builds upon fact. It is not merely the plaything of the fancy; it is an instrument of the reason. The business of interpreting the every-day experiences of life, and compelling them to serve ends of the greatest efficiency, is an art which in an especial sense is dependent upon the collaboration of the imagination. The imagination thus acts as the conceiving function of thought. It is the eye of the mind. A fact, as a brute fact merely, is a matter of simple observation. The imagination is the mind's contribution to the given fact. No fact by itself is self-illuminating. It is like a diamond which is placed in a dark room. The light of a well-furnished mind must illumine the fact before it will flash back its radiance. It is the inner vision alone which is capable of interpreting what the outer vision merely reports. We sometimes have to shut our eyes in order to see. The hidden significance which any fact may possess, its relation to other facts, what it may suggest, its value in terms of the uses to which it may be put, all arise from the activity of the imagination. Every fact—that is, every signif-

icant fact—is to the mind so much raw material, suggestive of indefinite possibilities. It has to be fashioned by the thought. It is to the mind what the block of marble is to the fancy of the sculptor. It must be dominated by an idea—that is, by the imagination.

A resourceful man in dealing with the everyday facts of experience must be able to picture them in a variety of possible settings and relations. He should possess what I would call the hypothetical instinct—that is, the art of suggesting certain suppositions and of premising their necessary consequences. It is the ability to see the effect in the cause and the cause in the effect. The one who may have this gift is able to perform a series of ideal experiments with the facts in his possession. It is not necessary to put them to any actual test; in all probability it will be impossible or at least impracticable to do so. His imagination, however, can sketch in fancy various probable results, which he will therefore accept or discard as a reasonable working hypothesis according to their promise of rewarding realization. A skill in supposition is merely a phase of the art

of imagination. It is an exercise in applied logic.

Our body of knowledge is nothing more than an amorphous mass of unrelated facts unless it is touched by the imagination. The fancy gives form to knowledge, relating part to part and part to the whole. It exercises the art of generalship in massing facts in proper order and sequence, and in directing their movement according to a comprehensive plan. Knowledge must have life also as well as form. Fact without fancy is dead. The imagination, therefore, must be summoned in order to give to the body of knowledge the spirit of life.

In all reasoning the mind puts together its material in some new combination possessing a significance which the various parts taken separately could not in the remotest manner reveal. The ingenious power to work out new combinations of old material is the peculiar function of the imagination, which in this manner gives a touch of originality even to the most commonplace tasks of life. By the constructive processes of the imagination every form of activity is widened in scope and deepened in efficiency

by the brooding thought which sees things in the light of what they may become. It is the imagination which sees the need and is capable also of devising the means to meet it.

This provokes necessarily a critical spirit, a spirit of restlessness which chafes under the imperfections of the present because a vision of a better future sways before it. The discontent which is resourceful always acts as a spur to the imagination. It is essentially the spirit of progress which discovers the possibility of improvement and presses toward its realization. An unimaginative people are proverbially unprogressive. They are satisfied with the present because they see no future. "Where there is no vision the people perish." However, the vision which comes to the prophet or to the far-seeing statesman is not merely the chance creation of the fancy. It is not the poet's vision. It is not the outcome of a fugitive thought or a chance suggestion. The imagination which discerns the future is the imagination which sees and is able to interpret the necessary implications of the present. The seer's vision must be founded upon insight; otherwise his foresight can have

no substantial basis in reality. The imagination pictures the future significantly only when the future appears as a necessary consequence of present conditions. It does not merely come after the present; it grows out of it. To see what underlies the present, is to see beyond it. How can we know what is possible unless at the same time we are able to penetrate beneath the surface of what is actual? Penetration, indeed, is the root of prophecy. The imagination, therefore, cannot swing clear of the reason. Although in a certain sense the imagination is free, yet nevertheless it is conditioned. Its dependence in this phase of its activity is upon the guidance of the reason, and that in no sense is a limitation of its real freedom. That is a poor freedom indeed which scorns the lead of the reason, for the fancy which waits upon wisdom has by no means lost its spontaneity or the spirit of originality. The imagination in its æsthetic ven ures may enter a region where the prosaic circumstances of life and the actual conditions of existence are consciously left behind; but throughout this sphere it is the imagination at play rather than the imagination

at work. Even here it might be shown that the play of the fancy must indirectly at least obey those rules of the game which reality prescribes and reason formulates. The unreal world of adventure, romance, or poetry must nevertheless present a show of verisimilitude.

My contention is simply that the work of life, however prosaic it may seem to be, calls for an imaginative mind—a mind of vision and yet not visionary, fertile in device and yet withal essentially reasonable, grounded in commonsense and yet not a slave to the obvious, eminently capable of meeting the possibilities of the future because appreciative of the significance of present condition and circumstance. Reason without the imagination is impotent. It may be able to deal with the commonplace and the routine, but it is feebly inadequate to cope with hidden possibilities. It is quite content to follow with the crowd, and to do the ordinary and the usual. It sees the actual, but overlooks those elements of a potential nature in which the secret of success may be discovered. It moves in the round of habit, but blazes before it no path of progress or way of reform. Its

conservatism is a concession to inertia rather than adherence to principle.

Custom is the natural anæsthetic both of the mind and of the will. And if a man's imagination is deadened by disuse, he can never think vigorously or see keenly. He yields to the circumstances which confront him, and is not able to overcome the inevitable obstacles or compel them to serve his purposes. He is blind to opportunity and has never heard the challenge of circumstance. He has no desire to invade the regions of the possible. The unimaginative mind is the dull mind, plodding and persevering, it may be, but with no vital touch. It is so dominated by the usual and the ordinary that it is inhospitable to those larger ideas which tend to provoke its hidden powers.

The mind not only deals with facts and things, but it has to do with persons as well. To live with men, to work with them, to control and direct them, to understand them, to bear with them, to accommodate oneself to their ideas, requires a special gift which is very intimately dependent upon the imagination. It is the art of picturing to ourselves the point of view

of the other man and of leading him also to see our point of view. It is an appreciation which is born of sympathy; and sympathy is only a special phase of the imagination. To know the possibilities of men is a higher art than to know the possibilities of things. There is no gift of such incalculable value to one in administrative control as the ability to recognize the coming man, and discount his future efficiency and usefulness. To understand what men think, and especially what they feel, to appreciate their needs and desires, their weaknesses and limitations as well as their strength, requires a power of divination in a consummate degree. To provoke the possibilities of others, there must be some range of fancy within oneself.

The imagination, however, is not only the instrument of the reason, providing its premises, massing its argument, discovering its proof, and revealing the various possibilities of its application. It is more than this. It is the mind's support in those long stretches of patient expectation, when the predictions of reason have not yet been verified in fact. Imagination is the ally of patience. The intellect has its need of

faith as well as man's religious nature. The power to see the thing that must be and to believe in its ultimate fulfilment,

> "To hope till hope creates
> From its own wreck the thing it contemplates,"

this is the high office of the imagination.

If, therefore, the imagination plays this important rôle throughout the whole range of our thinking, the question of its cultivation becomes a matter for serious consideration. It is a problem which concerns not merely the pleasures of appreciation and the delights of the mind, but has a direct and intimate bearing upon the efficiency and success of one's work itself. For this reason, then, there is a far greater need to exercise the powers of the imagination as a preparation for the practical pursuits of life than for the artistic. The artistic temperament is endowed by nature with the imaginative strain and its development will care for itself. But with a mind which is absorbed in affairs, it is far more imperative that the imagination should be quickened and its activity fashioned into habit. It is rather a futile task to attempt the

training of one's power of imagination in any direct manner; it is quite possible, on the other hand, to produce and foster an imaginative habit of mind by cultivating certain other habits which in turn will prove tributary to the end desired. Imagination is a spirit which must be wooed indirectly.

There is, for instance, the possibility of quickening our powers of observation, not so much as regards the extent and accuracy of the external sense of sight, but rather in respect to the inner sense of interpretation and discernment. For it is the peculiar function of the mind's eye to correct the first impressions mediated by the senses, to amplify them, and, above all, to apprehend their deeper significance. The vision of thought always transcends the vision of sense. It was no flight of the fancy, but one of the more serious offices of imaginative reason which was capable of seeing behind the daily rising and setting of the sun, the complete Copernican programme of our solar system. It is not the genius alone who possesses this gift. The art of seeing beneath the surface and uncovering buried meanings is one in which

we all can acquire a skill if we will only take the pains persistently to exercise it. It is the result of habit and discipline. It is no easy task, but the effort, arduous though it may be, is abundantly repaid by the result.

There is still another habit which tends to stimulate our imaginative faculty, namely, the endeavor in the exercise of our memory to reconstruct the original elements of an experience rather than merely restate them. The ability to recall facts literally in the same order and relations as one originally observed them illustrates the lowest order of memory. The man who is a bore usually has a good memory, but he has no imagination. The art of conversation consists in a certain skill of omission as well as that of emphasis. What not to say and what to lay stress upon, the imagination with its selective instinct alone can determine. There is an art of forgetting as well as of remembering.

There is all the difference in the world between learning a lesson which we can repeat upon occasion and mastering a truth so that it becomes the ready servant of our thought. To assimilate knowledge rather than receive it whole

requires some functioning of our imagination, for we must in our thoughts so transform the original elements of an experience that we can free them from local and temporal color and from the setting of particular circumstance, thus rendering them available for our purposes in other situations of a wholly different character. What we learn in one setting we usually wish to use in another, for experience rarely repeats itself in precisely the same manner or in the same order of events. It is, therefore, necessary in the acquisition of knowledge that we should endeavor to grasp the salient features of every situation, determining their true significance by a sifting process which will separate the essential from the non-essential.

This art of giving a universal significance to a particular incident is due to a subtle alchemy of the mind by means of which the elements of knowledge are transmuted into forms admitting of significant application throughout the whole range of thinking and of action. To acquire this art one should endeavor to cultivate the habit of mastering a principle rather than learning a rule. A principle differs from a rule in this

respect that the principle can deal adequately with the special case. The exception never proves the rule; it may, however, disclose some fundamental principle which is capable of explaining the exceptional case. That time-honored saying that the exception proves the rule is merely a mistranslation of the Latin proverb, *exceptio regulam probat*, which should read,—the exception *tests* the rule. No rule is sufficiently fortified to withstand such a test unless there is a recognized principle behind it. A rule is a mere order of procedure, and one who has learned the rule is utterly at a loss whenever a strange situation suddenly confronts him to which the rule is not obviously applicable. It is necessary for him to penetrate the disguise of the exceptional case and to discover the fundamental principle behind it; and this is itself an act of the imagination.

Also much may be gained in increasing our powers of imagination by acquiring the habit of presenting to ourselves the problem which every significant experience in life suggests, namely, that of economy in adjusting means to ends. How may larger and more valuable ends

be secured by a wiser choice of means? How may present conditions be improved? How may the traditional mistakes be avoided? How may we escape from the sway of the commonplace? These are some of the queries which tend to keep the mind alert and open to the possibility of a new order of things. The habit of contriving devices of improvement, or resourceful suggestion and progressive endeavor, is a constant spur to the imagination, whose power is increased with every new demand made upon it. Whatever the end of one's activity may be, it must appear first of all in the form of an idea in the mind, an idea which sees the thing that ought to be and compels its realization. Reason may plan, but imagination holds the torch to light the way, and if a life is to have intelligent direction and successful issue it dare not scorn the lead of the fancy which is born of reason.

The imagination, therefore, in the especial utility function which we have considered of increasing the sum total of life's efficiency, is at the same time not wholly devoid of a certain æsthetical significance. For any labor which

thought expands and directs according to a dominant idea is, in a sense, a work of art. There is always some one method which is superior in the completeness of its results to any other; there is always a way which is the most direct and most efficacious; there is always a process which gives the most valuable product; there is, in short, about everything, however prosaic and commonplace, an excellence which is ideal; and in whatever sense it is ideal it possesses an artistic value and significance. The craftsman who by the creative power of an idea discovers a hidden possibility in his craft and realizes it in actual form or deed is in that single respect at least an artist. It is the imagination which suggests these possibilities of excellence, a better for every good, and beyond that a best whose shadow falls across attainment as a challenge and an inspiration.

VIII

THE ART OF THINKING

THINKING is not an automatic function of the brain as breathing is of the lungs. For there are many persons who do not think at all, and yet manage to exist. Their lives are merely a series of sense-impressions which serve to stimulate certain habitual activities within a confined range of daily routine. And in the case of those whose minds do aspire to the dignity of thought, there is an unlimited variety in the method and the manner of the process employed; for thinking has no common programme or procedure. It is an accomplishment which must be attained, each in his own way, and which assumes always a pronounced individual quality. To obtain a mastery of the process of thought and direct it to efficient ends is an art. The very fact that we regard it as such, is itself a decided advantage in our endeavor to attain proficiency in its exercise.

As a science, thinking has its fundamental laws, its logic; as an art, however, it has no body of set rules which we may learn once for all, and ever after slavishly and blindly follow. There is no formula for wisdom. The art of thinking requires a command of all the resources of skill and inventive device of which our natures are capable. The true aim of education is to disclose the secret of the art. For education is not, as many mistakenly believe, a process of furnishing grist for the mill to grind; it is rather the work of constructing and perfecting the machinery of the mind itself, and of imparting the art of operating it intelligently as a master-workman.

The peculiar task of the teacher is that of informing the mind rather than that of giving it information. The one process prepares the mind for the free exercise of its own activities; the other merely furnishes it with so much to learn and so much to remember. The training of the mind should always be regarded as an end in itself, and never as a means to some other end, however important such an end may be.

The function of the school is not primarily

to prepare its students for college; nor is it the function of the college to prepare its students for business or professional careers. This idea of preparation as the sole end of education is a fallacy which entails most disastrous consequences. It tends to induce that lamentable attitude of mind which is always seeking something for the sake of something else. Education is far more than a preparatory discipline, vague and indefinite in its reach. It must be capable of showing by immediate results some obvious progress in the art of thinking. Nothing is so common to-day as this false conception concerning the chief business of school or college life.

If a boy in one of our so-called preparatory schools should be asked, "What is your object in the work which you are doing day after day at school?" in all probability he would reply without any hesitation whatsoever—"To get into college." Also if a similar question should be put to any freshman in college, his reply would probably be along the same line—"To finish my freshman year so as to become a full-fledged sophomore." The senior's answer would

be no doubt in a like vein—"To finish my college course and get out into the world." The school-boy's aim is to get into college, and the aim of the college undergraduate is to get out. This is most surely a strange anomaly. It is the fundamental error of being willing to put forth effort in daily toil year by year without the remotest conception of what result is desired or is desirable. The eagerness to advance over so much ground merely for the purpose of leaving it behind, and with a complete incapacity to appreciate the real test of progress and the true end to be attained, is one of the most common and insidious errors of the day among our students. Education prepares for one thing and for one thing only—the ability to think. It is a pitiable situation when a student is wholly unconscious of the main thing which he is supposed to be pursuing. Does his mind work? Does he know how to use it? Is there unnecessary friction here or there? Does the machinery at times seem out of gear? These are the questions of chief concern.

Moreover, anything which is so dignified as to be regarded as an end in itself, as the training

of the mind always should be, is for this very reason of distinctly greater value whenever it eventually comes to be used as a means to attain some other end. The student whose endeavor is not merely to amass sufficient knowledge to pass the entrance examinations for college, but primarily to acquire the art of using his mind so as to produce the greatest possible effect with the least expenditure of effort, he is the one above all others who in my judgment is best prepared to realize to the full the possibilities of a college career. The one whom we count illy prepared for college is not as a rule the young man who lacks a book or two of his Virgil or Cæsar, but the one who fails to grasp the point of what he studies, and does not know how to go about his tasks in an efficient and masterly manner. The deficiency which cannot be made good is after all the qualitative and not the quantitative one. A method of work counts far more than the knowledge of a multiplicity of facts. A student once made the following comment upon a question in an examination paper: "I do not regard this a fair question, because it requires thinking in order

to answer it properly." Such a statement betrays not only a lack of intelligence, but also of a sense of humor as well.

The problem which usually presents itself in the education of a young boy is this—an untrained mind, approaching an unknown subject without interest and without curiosity. A problem such as this, wherein all quantities are unknown and all negative, might very naturally be regarded as wholly indeterminate. And yet this is the teacher's problem, and it is one which he dare not regard as insoluble. Obviously the beginnings of a solution will lie in the direction of stimulating an interest in the work which must be undertaken. And it is just at this point that a very serious error of judgment is often committed; for in attempting to create such an interest, one's effort may be entirely misdirected. It is not wise to depend solely upon the subject-matter of their studies to arouse and sustain the interest of students. The "Arabian Nights," if written in Greek, could hardly suffice to hold the attention through all the drudgery of the Greek grammar and syntax. There is one interest which, above all

others, it is of paramount importance to awaken —the student must become interested at the very start in the working of his own mind. In the process of mastering the difficulties of a new subject he must be led to see at once that there are certain mental processes which he can soon learn to perform with facility and also with efficiency. No act is so absorbing in interest as that which we are conscious of doing well. And the art of thinking is no exception. To feel that we can work with skill gives a relish to every task, however difficult it may be. The initial consciousness of power is the beginning and promise of progress.

A boy's play is often a form of work, and yet he throws himself into it with untiring enthusiasm and earnestness, because he knows the game and its art. Indeed his pleasure in it is in proportion to his ability to play the game with ease and skill. How long would any one's interest continue in his efforts to learn the art of skating, if his ankles never recovered from the early tendency to wobble, and if progress never passed beyond the first experiences of catastrophes and bruises? The pleasure of any

sport is evidently in knowing how. We enjoy what we do well. The person who gives up the game of golf in disgust after futile attempts to learn the art of the game has obviously found no interest in the pursuit, for the very reason that his attempts have proved of no avail, and because he has failed to acquire any facility in drive, approach, or put. There is always a satisfaction in the free exercise of any faculty, whether of body or of mind, and therefore it is altogether important that every student should come to regard the art of thinking in much the same way as he has been accustomed to regard skating as an art, or swimming, or golf, or any other game which requires skill and resource.

He should be impressed with the fact, moreover, that every pursuit has its own peculiar art, which must be discovered if proficiency in that pursuit is to be attained. There is a method of approach, a point of attack, a correct procedure, which is designated by the phrase, "proper form," and which constitutes in any activity the essential conditions of most efficient and satisfactory results. Correct or proper form in this sense always represents the method

of maximum efficiency combined with minimum effort, and is attained only through the evolution of a common experience. Thinking also has its peculiar and appropriate form, and the art of thinking consists in acquiring this form of procedure, call it the form of play, or the form of work, as you please. One must understand the technique of his craft. It is foolish and short-sighted to give one's time and attention wholly to the matter of that which one learns, and little or none to any inquiry concerning the method which is employed in the process. To know the various devices by which a mass of bewildering facts may be reduced to order and system, to discover the trail and follow it to the heart of an unknown region, to command a situation by understanding it, to see the point, to interpret aright what is only implied or suggested, to know where to place the emphasis, to discriminate between what is essential and what is accidental,—this is the art of thinking.

Much of our thinking is similar to the processes which we employ in solving a difficult puzzle. There is a universal interest in all forms

of puzzles, an interest which is not confined by any means to the days of our childhood. To solve a problem, to translate a sentence whose interpretation is not obvious, or to perform an experiment in the laboratory,—these are tasks which create the same kind of interest as that which we feel when we find ourselves poring over an absorbing puzzle. The Latin sentence, for instance, is a puzzle, and there are certain well-known devices for disentangling its many knots and twists. No one need feel hopelessly lost in the intricate mazes of the Latin syntax, if only he has learned the art, or shall I say, the trick, which is necessary. When the trick is once mastered, and it is not a difficult one to learn, then there is a pleasure in the actual performance itself of construing sentence after sentence, because of the quiet satisfaction which we all feel in recognizing that what we are attempting is turning out successfully. We will always find sufficient variety in detail to stimulate our interest and not to deaden it. To make such an experience possible, it is absolutely necessary to guard against crowding a student's mind, and burdening his memory with

a load of unessential material to which he can see no point or bearing. It is foolish and a waste of time and energy to teach him the complete Latin grammar at the initial stages of his study. He should have at first only a working knowledge of so much of the grammar as he will need in construing simple sentences. Let him be taught the art of using knowledge as rapidly as he acquires it. The mere process of storing information is not in itself desirable. Bonded knowledge is so much unavailable energy. As one learns the art of using the material at his command progress is assured. On the other hand, to crowd the memory without the active exercise of the intellect to accompany it, dulls the mind and destroys all interest in any subject whatsoever. The mind, like the body, weakens when it loses the power of assimilating its food. If the student is constantly given something to do, and if he is started in an unknown field with a series of successes, he will gain that confidence which is necessary to sustained interest and persistent effort.

This does not mean, however, that only those tasks are to be attempted which can be

easily accomplished. One must learn also how to overcome obstinate difficulties and to persevere through all the tedium and drudgery which attend the early stages of every subject. But the mind must be prepared for the more exacting demands by acquiring a facility in dealing with the complete round of elementary methods and processes peculiar to the nature of the subject itself. No one can fight without weapons, nor work without tools. To overcome the difficulties which the labors of the mind must inevitably meet, one must have mastered all the preliminary difficulties of method and procedure. He is best prepared to endure the strain of the severer tasks who has already gained some consciousness of power in commanding the simpler conditions which the beginnings of an inquiry naturally offer. Perseverance in itself is not necessarily a virtue; it certainly is not if we are on the wrong road or if we are going about our work in the wrong way, and in total ignorance of what is necessary for success. It is a great mistake to urge any one to keep pushing ahead in an undertaking when the most valuable service that could possibly be

rendered to him would be to lead him back to the very beginning. The conscientious and plodding worker who keeps doggedly at his tasks with little or no results to show save a dulling of the mind and a breaking of his spirit should never be commended for his diligence. He is the rather to be regarded as a pathological subject. He needs some expert treatment. The diligence which is ineffectual is like the energy which is expended in a treadmill detached from any working machinery. There is no output to it—only weariness and disgust. There is no merit in unavailing virtue.

There is an error and a most prevalent one that mathematical studies require some peculiar and especial talent which if not possessed by native endowment can never be acquired. Here again there is an art which can be acquired as readly, I believe, as that of any other subject. The point which should be particularly noted is, that, without possessing the secret of this art, less progress can be made in the study of mathematics than in any other subject, and also the region of hopeless confusion is sooner reached. There is no subject, therefore, in

which so much depends upon making a proper start, and learning the proper trick and form. If the approaches are securely possessed, other difficulties can be overcome, and that without a loss of interest in the subject. It is impossible to discover the art of mathematical thinking by attempting to memorize complete demonstrations so that one can reproduce them word for word in a wholly mechanical manner. It is absolutely necessary to understand the significance of every process which is employed so as to be aware of the mathematical device in attacking the point to be proved, or the problem to be solved; and it must be possible for us also to recognize a similar method when we again see it. As a matter of fact the devices which are ordinarily used in mathematical thinking are not many, nor are they difficult to master. They may all be grouped under several distinct types, a dozen or more, which occur again and again. When familiar with them, a facility in their use follows readily, and the bugbear of mathematical studies may be once for all removed. The subject can then be pursued with pleasure and satisfaction; for there is a con-

tinual challenge of one's inventive powers, whose exercise, when attended by a fair measure of success, always creates an absorbing interest, and it may be at times a certain fascination as well.

In a certain class in mathematics there was a student who was most conscientious and plodding and yet with it all completely discouraged in his work. One day his instructor asked him concerning his difficulties, and added: "This subject cannot possibly be as difficult as you are bent upon making it; in fact no subject is so hard as you evidently think this to be. You are simply wasting your time, because you are going about your work in the wrong way." This incident represents a very common experience. There is a pitiable waste of effort in the most painstaking tasks of some of our students. They have never learned the art of study. This want tends to create difficulties which are not inherent in the subject itself, and to magnify those that necessarily pertain to it.

The greatest possible obstacle to progress of any kind is lack of method. Where, however, the student has learned the secret of making all

effort tell, so that there is no unrequited toil, then the question of interest in his work, or of the results that may be naturally expected, or of the progress that he may be making, will take care of itself. Kant has put the art of teaching in a sentence: "I do not attempt to teach my students philosophy, but merely to think philosophically."

The consciousness of the ability to use one's own mind is not of course the sole interest in the life of a student. But it is the initial and central interest nevertheless; and other interests will be found to range themselves about it as a nucleus. It is essential that such an interest should be created and maintained at all hazards. Start the beginner on the right road, point him straight and give him his direction, and all else will follow. A curiosity to know the reason of things, a critical discernment impatient of the irrelevant and the non-essential, an appreciation of the best thought of others and the power to assimilate it, a delight in the rigor of reason and the conquests of the mind,—all these come to one who has made the most important of all discoveries, that his mind is

an excellent working organ which he has learned to guide and control, and whose productive energy is a continual interest and pleasure. The consciousness of intellectual power opens all ways before him and speeds him forward. Many a prospect lures him. He embarks upon many a voyage of discovery. Studies are regarded no longer as a discipline, but as an accomplishment. A restless spirit of curiosity possesses him. The fever of knowledge is in his blood.

On the other hand, no one can become seriously or permanently interested in the products of another's mind who experiences no pleasure or satisfaction in the processes of his own. The power of appreciation must have its sources within. A young man in college who was heir to a large fortune was asked by one of his professors who had been watching his college career with some misgivings: "Why are you neglecting your work as you have been doing ever since you entered college? You are aware that you are to occupy a most responsible position in the conduct of your father's estate to which you are the sole heir. Do you not care

to have brains enough to enable you to discharge your duties in life with ability and possibly with distinction?" This evidently did not appeal very forcibly to the young man, for he rather naïvely replied: "I can always hire brains whenever I need them." It is difficult to say whether one is the more indignant at the hopeless lack of any concern for the development of his own mind, or at the complete ignorance and disdain concerning the true value and dignity of the minds of others which this remark implies.

Of course no art can be learned where there is no earnest purpose to master it. The art of thinking is no light undertaking. There must be some inner compulsion of such a permanent nature that it will prove capable of sustaining interest and energy in the arduous discipline which this art demands. It is not the teacher's function to supply a constant interest, and to be forever vigilant in removing difficulties and overcoming obstacles. His peculiar gift is to free the mind so that it can acquire an independence of judgment and a fertility of mental resource which are the essential features of a

liberal education. While the teacher should not have the full burden of the task of stimulating the student's interest and sense of responsibility, nevertheless his is a serious duty in this respect and at the same time an exceptional privilege. A conspicuous illustration of the power of a teacher to awaken a mind wholly unconscious of itself is given in the life of Gladstone. As a boy, Gladstone was at Eton for three years; during all this time he gave no evidence whatsoever of talent or of taste for the things of the mind. The following is the account which he himself gives of the intellectual crisis of his life which he experienced in his Eton days:

"At this time there was not in me any desire to know or to excel. There was a barrister named Henry Hall Joy, a man who had taken a first at Oxford. He was very kind to me, and had made some efforts to inspire me with a love of books, if not of knowledge. Joy had a taste for classics, and made visions for me of honors at Oxford. But the subject only danced before my eyes as a will-o'-the-wisp, and without attracting me. I remained stagnant, without

heart or hope. A change, however, arrived about Easter, 1822. My 'remove' was then under Hawtrey (afterward head-master and provost), who was always on the lookout for any bud which he could warm with a little sunshine. It was entirely due to him that I first owed the reception of a spark, the *divinæ particulum auræ*, and conceived a dim idea that in some time, manner, and degree I might come to know." (Morley, "Life of Gladstone," Vol I, pp. 29 f.)

Every school-boy, it is true, is not a Gladstone in the making; nor is every master a Hawtrey. Nevertheless there is always the possibility that a chance spark may kindle some inflammable material. To quicken the first flickering flame of knowledge and thereby enable a student to possess his own mind—this is the highest attainment and reward of one who would teach others the art of thinking.

IX

THE VOCATION OF THE SCHOLAR

THE life of a scholar is something more than a means of livelihood. It is a vocation; and where this is not recognized, the true scholar is wanting. The scholar is the link between the past and the present; the conservation of knowledge is in his keeping. His office is primarily that of an interpreter of truth; at times, however, he may become its priest and prophet as well. He springs from an ancient and honorable lineage. He is in line with that illustrious company of seekers after truth who have given in every generation an impetus to the thought and progress of the race.

The scholar not only inherits the traditions established in the learning of the past, but by the very nature of his labors he is brought into intimate association with the scholars of his own day. This contemporary contact is by no means the least of his privileges. Of course not all

scholars are teachers and therefore of one body by virtue of their common interests and pursuits. However, no one, I imagine, will deny that the natural habitat of the scholar is the school. The great universities of the Middle Ages and of modern times have been the homes of scholars. Without such a home the scholar would have been indeed an exile.

There is an exceedingly significant saying which has been handed down to us from the old Greek astronomer and poet, Ptolemy: "He is not dead who giveth life to knowledge." This profound observation applies in an especial sense to those who have founded our educational institutions and secured them upon a permanent basis of efficiency, and who have fostered them in wisdom, faith, and perseverance. There are many ways in which one may give life to knowledge,—by the spoken or written word, by a new thought, or through skill in putting an old thought in a new form, by discovery, by invention; but no contribution of this kind is so self-multiplying and so far-reaching in its results as that of establishing and maintaining a permanent centre for the diffusion and ex-

tension of knowledge; and at the same time to this end creating a community of scholars with a body of scholarly traditions and a high standard of scholarly excellence and ambition.

Whenever we find such an institution, we are at the sources of life. For it represents something more than the mere machinery of education. The school, the university, is never to be regarded as a machine; it is an organism. As an organism it is not only instinct with life as a whole, but the various parts also of which it is composed are themselves living beings. The forces which are active in such an organism are the powers of personality. The living spirit of the teacher must quicken the living spirit of his student. It is the play of life upon life. Consequently they who organize these living forces of knowledge and permanently institutionalize them do not die. They live again in all the sources of life which they create. They live again in every trained mind and in every tempered spirit which is the product of such influences. They live again in every truth that is possessed, in every task that is performed, in every problem that is mastered, in every kindling

flame of thought, in every advance of knowledge, in every comprehension of the past, and in every vision of the future; they live again, not only in the more serious labors of the scholar, but also in the joy of knowledge, in the simple pleasures of appreciation, and in the intimate comradeship of the scholar's craft; for the life which they impart to the things of the mind shows itself in the flower as well as the fruit of knowledge.

The debt, therefore, which the scholar owes to those who initiate the great constructive forces in education is something more than a passing sentiment of gratitude. His is a more serious obligation. He is bound in honor to preserve these forces in the continuity of their development along lines of a widening and deepening progress. And to this end he needs to remind himself from time to time of his high vocation as a scholar. In relation to the pioneers of education and his predecessors in the field of his labors, he is in a peculiar sense the trustee of knowledge. The sacred funds of truth are in his keeping, and he is responsible not only for their security, but also for their transmission

enlarged and enriched to the coming generations. Progress in knowledge is constantly interrupted, because time puts a limit upon all effort and attainment. With years cometh wisdom, also cometh the end. Another generation must begin the task of knowledge anew. And yet such a beginning may always be undertaken from a point of decided advantage, provided the teacher and scholar fulfil their obligations in any adequate manner. There is a growing body of truth which is the possession of the race, and which is the free heritage of every one who would walk in the way of knowledge. It is the inalienable right of all to share this common bounty of truth. To conserve this racial inheritance, to make it available for the new generation, to place their feet in the way of progress, to put in their hands the lamp of knowledge, to bid them seek the truth and pursue it,—this is the scholar's vocation.

There is, moreover, an additional obligation which every scholar owes to his distinguished ancestry. The truth of yesterday must be adapted to the needs of to-day. The scholar's function is not merely to transmit knowledge

of one generation to another; he must be prepared also to interpret the knowledge which he possesses, and the process of interpretation is always a transmuting rather than a merely transmitting process. As knowledge is a living and a growing thing, it must possess the power of new adaptations. We are disloyal to one who utters a truth if we seek to stereotype it in fixed formula or final dogma. It is not the sole function of the scholar to mass facts and illustrate them, nor of the teacher to hear recitations, to correct themes, and check the errors of memory. Whether the scholar is writing a book or conducting a class exercise, it is his business above everything else to give life to knowledge. This is the chief office of the interpreter of truth. It is well also to remember that the living truth does not always appear full formed. It, too, has its stages of growth which it must pass through in order to come to the complete revelation of its nature. It is possible, therefore, and indeed it is quite natural to expect, that in the transmission of knowledge the scholar through the patient toil of research and the brooding of thought may also contribute to the truth already

possessed a deeper meaning, a wider application, a more vigorous life.

In the age in which we now live knowledge is changing with marvellous rapidity. The scholar's task, therefore, has never been so interesting, never so difficult. The notable discoveries during the last decade alone, in physics, chemistry, biology, bacteriology, and other sciences, have necessitated a distinctly more profound if not a new interpretation of nature. Not only the material content of knowledge, but its methods also reflect the spirit of progress which characterizes the activities and achievements of the present age. The new instruments of accuracy in research, the new processes of discovery and invention, and the more intimate knowledge of the sources in every field of inquiry certainly entail an obligation for larger results in scholarship than ever before. Unless the scholar has a discriminating appreciation of recently acquired truth he cannot interpret aright the truth of the past; and if he fails in this particular, he is recreant to his trust as the teacher and lover of knowledge. The work of restoration which the scholar must undertake in reference

to the treasures of the past must be prosecuted with a wise consideration of its relation to the knowledge and the needs of the present.

However, it should not be forgotten that amidst much that changes in the world of scholarly research, there is much also that remains constant. And it is to this constant element in truth that the scholar must preserve an unswerving loyalty. The popular philosophy of the day repudiates altogether the existence of any such constant element, and maintains that all truth whatsoever is variable, relative, shifting. Professor James, the most brilliant apostle of this creed of change, insists that "we must be prepared to find false to-morrow what is true to-day." This is a statement which in a restricted sense is true, and which admits of an exceedingly wide range of illustration. We are constrained to confess that we live throughout our days under bondage to the contingent, and that the hazard of uncertainty must be reckoned with in all our plans and undertakings. And yet while conceding all this, it nevertheless remains true that there are certain ideas which in the history of the race experience have become

established for all time, for all places, and for all persons and things. These ideas rest upon a secure foundation. Amidst all that is fleeting and variable in thought and experience, there must be some background of truth which is unchanging. Otherwise the equation of life would consist solely of variables, and would be therefore indeterminate and wholly devoid of any significance whatsoever. The variable must have the constant to give it meaning. We naturally incline to the belief that there are certain fundamental ideas and sentiments which are independent of time and circumstance, of the changing opinion and fashion of the day. Once true, they are always true. They are the fixed stars by which we take our reckoning and lay our course.

The scholar particularly dare not ignore that consensus of thought which ages of reflection and experience have established. He must have some part in the commerce of truth. However original he may be, he cannot wholly free himself from the past. Among its stores he is bound to find something fundamental and constitutive, which is both true to the reason and

law to the will. I am not in sympathy with the declaration of Professor James, in his "Pragmatism," that we must "cultivate the attitude of looking away from first things, principles, categories, supposed necessities, and of looking towards last things, fruits, consequences, facts." On the contrary I believe most profoundly that the most significant quest of the scholar is the endeavor to discover the "first things" which constitute the ultimate ground of our experience. The mind which has not formed the habit of regarding "first things" will hardly be capable of commanding the "last things." To comprehend the beginnings, to understand the essential nature and ground of any group of phenomena under investigation, as well as the implications which they necessitate, is indispensable to the clear appreciation of their worth, or to the possibility of further discovery in the line of their development. To discern the truth that is fundamental, to appreciate its significance, to emphasize and proclaim it, to cause it to prevail by making it intelligible,—this is the scholar's vocation. And in this high office he is the priest of truth. As such he

must guard its sacred oracles, maintain its traditions, follow the lead of its light, and cherish the spirit of devotion to its cause.

The scholar who is worthy the name cannot be sceptical concerning everything. He must believe in something, and believe it profoundly and bear witness to its truth. Complete scepticism is the *reductio ad absurdum* of scholarship. Doubt may be the beginning of inquiry; it is surely not the goal. To doubt is merely the determination to see deeper and understand more clearly. Doubt always marks a transition stage in the processes of investigation. It does not produce satisfaction, only restlessness. In its normal function it points to something beyond itself, to a more comprehensive knowledge, to a more securely grounded conviction. Doubt leads to the truth which lies in the past as well as that which beckons us from the future. To allow the sceptical attitude therefore to become a permanent disposition breeds a cynical spirit; and nothing is so inimical to the vigor of scholarship as a cynical mood which is ever petulantly asking: "What is truth?"

Our fathers believed in a body of truth that

changeth not from generation to generation, that is like the word of God which abideth forever. They would have repudiated with scorn of indignation the modern pragmatical doctrine that "the true is only the expedient in the way of our thinking, just as the right is only the expedient in the way of our behaving." A false theory of knowledge based upon a perverted theory of ethics such as this would never have won their allegiance. They built upon a more stable foundation. They believed in the sovereignty of reason and the compulsion of logical implication—that compulsion which recognizes uniformity in science and demands consistency in morals. They believed that man is born under an uncompromising law of righteousness which is above expediency and the suggestions of policy and convenience. They believed that man is a person and not a thing, that he is ordained to progress, that he is an end in himself and never merely a means to some other end. They believed that the law of mutual co-operation should prevail throughout the family of human beings, and that in the violation of that law the integrity of society is permanently im-

paired. They believed that all knowledge must minister to righteousness. They believed in the cause of honor, in the cause of justice, in the cause of freedom, in the cause of the Eternal God. This creed is our inheritance. Our highest obligation as scholars is to preserve inviolate the ancestral continuity of conviction and certitude. The scholarship of the present will doubtless carry us far beyond certain traditions of the past. We will leave much behind that possesses only an antiquarian value. But with all that must be forgotten and with all that is new, we dare not repudiate those fundamental principles—old-fashioned they may be but never obsolete—in which reason is justified, character is grounded, and moral vigor is maintained.

All scholarship must make eventually for the broadening and deepening of life, the life of the mind and the life of the spirit. The results of scholarship are not in the interests of a favored class, but of humanity in general. The body of scholars is not a fraternity whose order is to be developed and enriched for its own sake. Within its borders there are no occult mysteries nor exclusive privileges. The word which a

scholar utters may be understood in the first instance only by those who speak the same language and are conversant with the same symbols. And yet the periods of the most productive scholarship have usually called forth their interpreter, their prophet, some peculiarly gifted genius who possesses the faculty of making the results of scholarship intelligible to the masses, at least so far as these results have a bearing upon the life and character of a people. The old Greek philosophy had its Socrates, Christian theology its Augustine, the Reformation its Luther, the philosophy of the French Revolution its Rousseau, and German philosophy its poet interpreters Goethe, Schiller, Lessing, and Herder, and in another land and tongue its prophets, Coleridge and Carlyle.

Every scholar cannot be a prophet to the world, but he can contribute something to the message which one day the chosen prophet will bring in the name of scholarship to the heart and mind of a people. The individual may always remain a toiler in secret. The service that is indirect, however, is none the less important although it may be less conspicuous.

A single thought is often born of many minds. In the progress of the truth, the individual scholar here and there who has contributed to it may be forgotten, and he may never enjoy the recognition and the praise which is his due. Nevertheless he has a deep satisfaction in the consciousness that the results of his labors though lost to sight have become in a small measure at least a part of the thought of the world.

Upon the stone which marks the grave of Fichte by the Oranienburg gate in Berlin, there is this inscription, which adequately expresses the scholar's vocation and the scholar's reward: "The teachers shall shine as the brightness of the firmament, and they that turn many to righteousness as the stars that shine forever and ever."

X

THE SUPERFLUOUS IN EDUCATION

TO-DAY our schools and colleges are under fire of criticism from many quarters; and the burden of the indictment against present-day methods in education seems to be that many if not most of the subjects which are taught are superfluous. In reference to this charge, however, I am inclined to apply Voltaire's whimsical paradox — *Le superflu, chose treès nécessaire.* The zeal to eradicate the superfluous may pluck by the roots many a plant of whose flower and fruit we may not be deprived without incalculable loss. What standard is available, according to which one can discriminate between that which is superfluous and that which is not? The answer to this question is not far to seek; for it is heard above the many voices of our age with insistent reiteration—"whatever does not contribute directly to efficiency in life, that is superfluous." This is the voice of pragmatism in philosophy, of utilitarianism in morals; in

political circles this same idea is expressed in the creed of "practical politics"; in the world of industrial enterprise it lurks in the phrase, "business is business," whose tautology is a flimsy disguise of irresponsible practices; in religion even a similar disposition is shown in the desire to convert the church into a working club instead of a house of worship.

With many this idea of efficiency, as the end of all education and the standard of all values, is still further particularized by limiting efficiency to the sphere of one's professional or business activities. To make a man efficient in his special calling,—that, it is insisted, should be the sole task of education. And consequently there is a general marking down of all values to that level. This tendency is seen in the emphasis which some of our educational institutions are placing upon technical and professional courses which even in the undergraduate years are pursued to the exclusion of all the more humanistic interests. Fit the boy for the special work he has to do. Let everything be sacrificed to that end. Here, it is alleged, is a principle which will enable one to devise not

only a satisfactory curriculum but also a programme of life. If the young man, is expecting to be a doctor, let him confine his attention solely to the studies which will contribute valuable material to the store of knowledge needed in this profession—such as the general knowledge of plant and animal life, of human anatomy and physiology, of chemistry and kindred subjects. Let him begin to narrow into professional grooves before his entrance into the professional school. He will thus save time, and prevent an enormous waste of energy. When we come, however, to examine this position more particularly, even upon the footing of efficiency, it is evident that the adherents of such a theory are in grave danger of defeating their own purposes. The man most efficient in his business or profession is the one who possesses some reserve power over and above that which he may ever be called upon to expend upon the actual labors of his specialty. A man always needs more than he uses. He who can do but one thing, never does it supremely well. An excess of power is an essential and significant factor in efficiency.

In determining the strength of materials, the mechanical engineer never thinks of attempting to calculate stress and strain forces so precisely as to adjust a given beam or girder to the exact load it is required to bear. On the contrary he recognizes the necessity of allowing for a substantial factor of safety, so that the strength of the material will exceed the limit of any possible exigency. It is the surplus strength that makes all construction solid and secure. In a similar manner a man's strength must exceed the exactions of his tasks by a reassuring margin of efficiency; otherwise his work is but poorly done. Every man of force should possess some power in his nature which can be felt even when it is not actually operative; and when it is operative, it should give the impression that its resources are inexhaustible.

It is in the reserve power which we insensibly discern back of a man's personality that our confidence in the lawyer, the doctor, the minister, or the engineer is grounded. The difference between the ordinary and the extraordinary man in professional or business life, lies in just this surplus of power which in the daily routine

of life is never required. When one possesses such a power, his efficiency is increased in a marvellous degree; for he brings to his work a mind larger than his tasks, and a nature stronger than the pressure which it must sustain. On the other hand that man is doomed to mediocrity who has in his possession no superfluous knowledge beyond the ordinary demands of his craft, and who finds himself a stranger in any company beyond the bounds of his own guild.

Therefore if in the studies which we select as the best preparation of a young man for his future work in life, we have constantly in mind only their direct bearing upon the special field of his activity in later years, then we are doing that young man a very serious and distinct injury. If the range of his knowledge is merely coextensive with the programme of his prospective duties in the limited field of his profession, we may expect from him only very meagre attainment. Liberal knowledge means precisely this, that it serves to emancipate a man from the bondage of his specialty. He is at home in other fields, and when from his various excursions into their

regions he returns to his own work, he moves in the sphere of his labors more boldly and therefore more efficiently because he need not live always under the limitations of its boundaries.

Our college courses should not attempt to prepare a man primarily for any particular set of tasks, but for a far more significant and mysterious event,—the coming into possession of a mind. A man's mind is the instrument of his productive power. The measure of his future efficiency is his mental capability. Therefore it should be the end of all education to develop every possibility of the growing mind to the full extent of its capacity and strength. Every stream of knowledge which has its source in the hidden springs of the mind sooner or later finds its way into the central current of life, adding velocity and volume to its flow. The very thing which may be regarded as superfluous often proves a revelation of concealed possibility and of potential power. The college course is a period when the student and teacher together should be engaged in prospecting adventures for the very purpose of discovering the veins worthy to mine. Certainly nothing can

be deemed superfluous where everything is possible.

It is the glory of the industrial world in the last generation that its inventive minds have solved the problem of its waste material. They have acquired the art of transforming the superfluous into valuable products. The residual phenomena have disclosed sources of unimagined possibilities which have made for the comfort, convenience, and efficiency of our modern life. In the acquisition of knowledge likewise, the by-products are not to be despised nor lightly overlooked. In them there may lurk the germs of power which in the years of an active life may pass through many transformations, appearing now and again in a force whose source is unrecognizable, but which nevertheless may give to the mental energies of the man an added momentum and impact.

It is well, therefore, in the early years of training to strive to develop as many and as diverse interests as possible. It is the period of discovery as well as of drudgery and routine. That mind is richly furnished which has established for itself a widely ramifying net-work of

associations. The more complex this mesh of associated material, the greater is the possibility of suggestion, leading to new points of view, to invention, or to discovery; the greater also the possibility of forming the habits of critical and mature judgment. Professor Ernst Mach of the university of Vienna, in an essay entitled "Accident in Invention and Discovery," draws attention to many interesting cases wherein accident has been a conspicuous factor in the field of scientific research. It is very significant, however, that in every instance which he mentions and in every instance which suggests itself to memory, is one in which the chance suggestion occurs to a mind already possessing a wealth of profound and varied knowledge.

Judged, therefore, even from the point of view of efficiency alone, the superfluous plays a part in our training of which we are never fully conscious and which we never adequately appreciate. Nevertheless this by no means exhausts the sum total of its good offices. It serves to minister also to the making of that margin of the man which has a value over and above his professional activities and attainments. To some

practical minds it seems wholly unnecessary that any man should be more than a good working machine. However, the plus element, which may be superfluous as regards the mere machine idea of human activity, nevertheless marks the essential quality of man as man.

This human being so variously endowed, with his wide range of interests and sympathies, sustaining manifold relations with the great world about him, rejoicing in his varied pleasures and pursuits, this centre from which so many lines of actual and of potential power radiate, surely this creature is something more than a machine for producing briefs and prescriptions, contracts and inventories, investments, balance-sheets, and tariff bills. The man must be bigger than his business or his profession. He is not only a lawyer, a doctor, a legislator, but he is a citizen, a companion, husband, father, friend. He has innumerable points of contact with his fellows. The responsibilities of life press upon him from all sides. If there is no surplus of mind and heart to meet them, the man is poor indeed. It is the overflow of a large nature, the superfluous if you wish so to charac-

terize it, which lends tone and color to a man's life, which gives him a place in his community, and which makes him a significant part of his day and generation. Back of his spoken word, back of his deed, back of his silent presence in the company of his own kind there is an immediate recognition of the warmth and wealth of his personality. It is the superfluous that marks the difference between justice and generosity, between bare decency and magnanimity, between the full measure and the overflowing. It is the superfluous quality of a man's nature which provokes love, and not merely admiration and respect.

Asking one of my colleagues recently concerning his estimate of a certain eminent scholar, he replied: "He is a great scholar but a small man." Now there is certainly very little satisfaction in the consciousness that one is ranked as a brilliant lawyer or a skilful surgeon, if at the same time he has the common reputation of being a miserable specimen of a man. At the last count a man is judged according to the extent and depth of the vein of humanity which may be discernible in his nature. By that test

he stands or falls. The moment a hollow ring is detected in his word or deed, that man is lost. No amount of skill or proficiency can compensate for the want of that solid basis of manliness which from the strictly practical view of utility may be regarded by many as altogether superfluous.

There is a certain type of provincialism which is temporal rather than spatial, which holds a man fast within the boundaries of his own age. No one is truly cosmopolitan who knows nothing of the world beyond the confines of his own generation. To live the life of to-day in its fulness one must know the life of yesterday. To be a citizen of the world, one must have some appreciation of the world's thought, its efforts and achievements, its faith and its hope in the ages which are past. To one who does not find himself a stranger in a distant century there comes an expansion of mind and of sympathies which enables him to bring to his own day and to his own life the deep satisfactions of superfluous knowledge and power. The foundations for this interest in the far-off lands of time must be laid during the college years. And it should

be regarded as an essential function of this man-making enterprise to which our colleges are pledged, to stimulate and foster such an interest by every conceivable means.

The philistine is usually efficient. There is no charge against him on that score. Indeed it is just because he is so practically efficient and nothing more that he is the philistine. His values are all standardized. He has no appreciations, only appraisals and inventories. He is in the world but not of it, because his tastes and interests command so small a corner of it. Several years ago, while spending a few weeks in Rome, I chanced to meet one of these hopeless individuals who was completely stript of all superfluous interests and knowledge. He had possessed the native wit sufficient to accumulate a large fortune. As regards the treasures of Rome, however, he was the veriest pauper. He did not know enough to conceal his ignorance. Seated opposite to me at dinner one evening, I overheard him asking his neighbor, a young Scotchwoman who was a student of archæology in Rome: "What is there worth seeing in the Palace of the Cæsars? There is nothing

there but ruins, is there?" The reply was eloquent in its simplicity, and penetrating in its complete understanding of the man. "No," she said, "nothing but ruins." Her questioner was beyond both instruction and rebuke. In his nature there was nothing superfluous, and consequently everything that was not reflected in his shallow and limited capacity was regarded by him as itself superfluous. For him the ruins of Rome could better be replaced by modern office buildings, and its forum become indeed an actual market-place. To a limited nature most things will naturally seem superfluous, just as to a great nature nothing is superfluous.

The crucial tests of life usually prove the man rather than his professional ability and skill. The emergencies which call for instant decision and prompt action tap the hidden sources which never can be discerned by surface observation. What the world may never have discovered, what the man himself may have been wholly unconscious of possessing,—far-off dreams and fancies, records of forgotten interests and studies indelibly stamped upon his nature, experiences which in their time may have served to discip-

line the mind and temper the spirit,—these superfluous elements of his being burst into power, and become efficient to heal, to strengthen and to save.

It is the superfluous which forms the unseen foundations of character and unconsciously fortifies our will and purposes. It is the superfluous also which gives zest to simple pleasures, which makes a tramp through the woods a delight and not a bore, which provides an avocation for us as well as a vocation, so that when the office or work-room is closed the doors of the world swing open to us. It is the superfluous which puts a book into our hand and crowds the mind with new thoughts and quickens the heart with a fresh impulse.

Without something superfluous, nothing is complete. The teacher must possess superfluous knowledge, a superfluous interest also in the young life about him; the man of affairs must possess superfluous power; our companions, superfluous wit and good-humor; our friends, superfluous affection and sympathy; and he who would advance the world's progress, superfluous enthusiasm and hope.

XI

SECONDARY STRAINS

IN the late afternoon of August 29, 1907, the great cantilever bridge across the St. Lawrence River at Quebec gave way of its own weight, and some seventy workmen engaged upon this massive structure were carried down to death amidst a tangled mass of twisted rods and beams. The bridge was carrying at the time no unusual load; indeed it was carrying no load whatsoever save the weight of its own structure; for it was still in the process of building, and even before it could be put to any actual test of its calculated strength it collapsed and crashed into the river beneath.

The whistle of the construction company had just sounded the end of the day's work, the last day's work for the bridge builders save the four or five who alone were rescued from the falling mass. This tragedy of engineering skill and of constructive enterprise, this tragedy also of

human life completely bewildered the scientific world. There is a mystery about an event which in the light of mechanical theory is impossible. This structure according to the calculation of the most expert and skilful engineers was capable of supporting over twice the load it was carrying at the time of its fall. Subsequently the most painstaking investigation of the wreckage disclosed the fact that no defective material had been used in the construction; moreover, no dynamic shock nor unusual wind pressure had occurred in connection with the disaster. What, then, was the structural weakness which caused this bridge to fall under its own weight? Was there some colossal blunder in the strain calculations? Was there some egregious error in the plans of construction? Was it the carelessness of foreman or workmen?

For some time no one could give a satisfactory answer, although many were essayed. Finally, however, when the official report of the engineering experts was made public, the mystery was cleared. It seems that the beginnings of this stupendous collapse were traced to one of the

great bottom chords of the bridge, designed to support the main structure resting upon it. This chord was a latticed beam fifty-seven feet in length, composed of four ribs or webs braced together. The bridge fell because there was a buckling of this supporting beam. And this buckling of the beam occurred because its several parts were not sufficiently braced together so as to enable them to act as a whole. Instead of forming a single compact piece, they were merely so many separate pieces, and therefore incapable of offering adequate resisting power. No part was at all defective; each was equal to the load it was calculated to bear, with a considerable factor of safety provided for. Strong in themselves, their combined strength was wanting merely because the parts did not hold tightly together.

What are known as the secondary strains, to which a structure such as this bridge is exposed, had so loosened the several parts of this immense central chord that it gave way under the pressure of the primary strains—that is, those strains due to the actual load which a structure must support.

It seems that in the work upon the Quebec bridge rivets had been used which were slightly small for the eyes which they were supposed to fill completely and tightly; consequently the parts were not held compactly together, and so the ordinary vibrations and changes in the pressure tension of this huge structure would tend naturally to loosen them more and more. With the loosening of the parts the long beam would necessarily begin to sag somewhat; and for every fraction of an inch which such a supporting member bends out of the straight line there is a rapidly increasing ratio of weakness until finally the elastic limit is reached and the crash comes. The secondary strains cannot break but they can loosen and bend; they thus weaken a structure so that it is no longer capable of resisting the primary strains.

It is perhaps not too forced an application to discover in this disaster certain suggestions as to the significance of the secondary strains of life in their bearing upon character and conduct. From time immemorial, human activity has been regarded as a process of building. Each individual erects some kind of a structure into

which he builds his deeds, his thoughts, and his purposes. Like a bridge his life must carry its load. Other lives must pass and repass upon it. There are many who come to depend implicitly upon its stability and to feel an instinctive security in its power to resist the daily tests of stress and strain. While it stands, the commerce of man is promoted, and life is safeguarded from peril of accident and calamity. But if it falls, others go down with it into the flood.

The human disaster, when the collapse comes, causes the same kind of bewilderment as that which was occasioned by the fall of the Quebec bridge. It is the fall of the strong man that is so difficult to understand. Of the weak man we naturally expect disaster; and there is no shock of surprise when it comes. But when the strong man sinks under his load, then all of our calculations seem to have wofully miscarried. We look at the wreckage in amazement and exclaim: "How is it possible that such weakness should come out of such strength?" Here is one whose life has been a long discipline of endurance. He has accustomed himself to carry heavier and heavier burdens as the years have

gone on, and to resist greater and greater pressure. His powers of perseverance and resource have been taxed to the uttermost and have never failed. His name in the community is synonymous with stability and integrity. Of a sudden, however, this structure gives way of its own weight, and crashes into the depths which mark and yet hide its shame.

What is the reason? The answer to this question may be suggested by the Quebec bridge. May it not be possible that this man has been capable of resisting the primary strains of life, but not the secondary? His life has been strong to bear its load, even to endure the storm pressure which it has been called upon to meet from time to time, but possibly it has not been able to withstand the shaking and loosening of its parts, the friction of their wearing one upon the other day after day, the consequent sagging of the whole and the final point of breaking.

Character is composite. Its supporting members which are variously related must be compactly braced together. A very insignificant element may serve to hold more important parts

in place. Of what avail the strong massive plates if there is a shearing off of the rivets which bind them together? The first traces of inconsistency, the breaking down of principle in small and seemingly immaterial particulars, some policy of indirection, some concealed methods, some disingenuous explanation, these symptoms, slight in importance though they may seem to be, nevertheless mark the beginnings of possible disaster. The man's character is no longer whole. And this is precisely equivalent to saying that he is no longer a man of integrity. The loosening of the elements of character, the elements of honor, of honesty, of self-respect, of self-reverence, throw the man's whole nature out of the straight line. With this sagging of character both its supporting and resisting power are immeasurably lessened; and one day it gives way under the pressure of a load no greater than those we have been accustomed to see it bear year after year.

Then we ask how it is possible that a man with such tested character should come to disappoint every expectation and promise of his nature. According to our calculations this

programme of disaster was impossible. In our reckonings, however, we never for a moment suspected, possibly the man himself never suspected, the steady pressure of the secondary strains in his life. The world sees only the disaster; it does not see how the man himself by slow but sure processes of deterioration day after day has been preparing for it.

The very consciousness that one has overcome successfully, perhaps easily, the primary strains of life may in itself tend to put a man off guard as regards the secondary strains to which his nature is exposed. He ignores them; they may pass unnoticed until seen by their effects upon him, and these effects may have created already centres of weakness which it is too late to reinforce. Some supporting chord may have reached its elastic limit, and the breaking-point is inevitable.

How often this happens. We observe it again and again. A young man proves himself strong to resist the temptations of his early youth. He passes through them all unscathed, he shows himself diligent, self-restrained, obedient. He keeps his head cool and his feet on the

ground. Later he comes to the years of struggle, when all efforts are bent upon establishing himself securely in the business or professional world. He is not afraid of work. He eagerly seeks it, and seeks, too, the hours of extra service. He toils early and late. He is industrious, thrifty, capable. His courage and enthusiasm are never for a moment abated. The burdens which he bears only serve tc increase his strength and develop his powers. His career is one of steady progress. The primary strains of life he has withstood conspicuously and nobly.

He now meets the temptations of middle-age, subtle, strong, and undermining—temptations which for their testing and searching power are incomparably more formidable than any of the trials of youth. The secondary strains begin to operate. They are with him the strains of success. For with success comes leisure, added sources of power, the means of gratifying every chance desire, and the call of ambition. The simple setting of his life has been replaced by an increasing complexity of interests and activities. The old delights begin to pall, and he craves the stimulation of more highly spiced

pleasures. The intoxication of success may induce a recklessness of enterprise which puts in jeopardy the fortunes of himself and of others. Their happiness, and possibly their lives, is in his keeping. The individual temperament will in most cases determine the direction and extent of the lines of strain. Whatever the weak point of his nature may be, it is bound to feel the pressure due to the extra burden of weight which success always entails. In the calculations of strains for a bridge or building, a storm factor is reckoned with in order to provide for the exceptional pressure of high winds or even of a hurricane upon the structure. For man, however, it would be far more important and to the point, to compute a prosperity factor, and allow it, moreover, to fall well within a wide margin of safety.

The strains of struggle seem often to steady a man; the pressure, however, of success proves too strong for him to withstand. In the fight he is noble, but in the victory ignoble. Cæsar once said this of Pompey: that he knew how to win a victory but he did not know how to use it. This is in a measure illustrated also by our

late civil war. As a people we withstood the shock of battle and the strain of the long years of national trial. The secondary strains came with the tests of reconstruction. These strains, unhappily, were not so nobly resisted. They created a loosening and separating of the strong elements of our national character to such an extent that when we turn our thoughts to this period of our history, it provokes just condemnation and shame. And in the progress of our national life during the last generation also, we have been strong enough and wise enough to resist the primary strains. It is in the secondary strains that our dangers obviously lie. There are many forces now at work which are unsettling and disorganizing, and which tend to unfit us for the supreme test when it comes.

The testing strains, however, are by no means confined to the years or to the experiences of success. There are many who have never known success in any full or overflowing measure, whose natures, nevertheless, are under the constant pressure of certain secondary strains quite as serious and quite as menacing. There

is a man who has passed that period of his life when all things seem possible, when hope runs high and the dreams of the future bring joy and the eager haste to realize their alluring prophecies. For this man, life has become a routine and a discipline. Opportunities have come and gone; the actual in all its grim reality has replaced the possible. His habits have set into hard and fast lines. He no longer looks for the surprise of the unexpected or for the glorious chance of an untried career. The unknown has now no charm of mystery about it—only dread and fear. Courage begins to falter, the spirit loses its spring, and hope dies. Human strength, like steel supports under constant tension, without change and without rest, loses its elasticity and consequently its live power of resistance.

When one yields to the pressure of discouragement, and supinely submits to the fate of circumstance, when he resigns himself to ineffectual moods and to the cynical sufferance of the inevitable, then it is that the dead weight of the load long carried crushes and kills him. When the secondary strains of life weaken and wreck

a man's spirit, he falls long before the breaking-point is reached.

The strains of monotony and of dulness, of work without reward, of responsibilities without accompanying authority and the liberty of initiative, of the grind of life without its pleasures, of patience without hope, of duty which has become mechanical, and of purposes whose realization is merely the regular antecedent of their repetition, these are the strains from which some lives, indeed many lives, are never free, but which they must resist until the end. No wonder that many a stout heart and brave spirit grows faint and fails.

There are some natures, however, which are never affected in the least by any of these secondary strains of life, simply because from the beginning they have yielded constantly to the pressure of the primary. They need no subtle weakening process to prepare them for failure. They have by nature no moral force, and therefore they instinctively adapt themselves to the pressure of native propensity without so much as offering a show of resistance. The characters of Shylock and Iago are determined by the

primary strains of their own natures; Macbeth and Hamlet, on the other hand, are the victims of the complex secondary strains which served to bring naturally great natures to a miserable end. Cardinal Woolsey yielded to the secondary strains of his ambition, and hence his fall; Richard III, however, was by nature inhumanly cruel, and therefore the primary strains of his own evil spirit determined his character, his career, and his destiny. The tragedy of the secondary strains is that they destroy noble lives, turning strength to weakness and glory to shame.

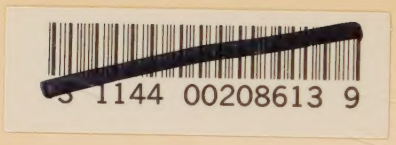
The primary strains are usually obvious. They appear within the sphere of ordinary observation. We can reckon with them and within certain limits we can predict the results to which they may give rise. The secondary strains, however, are concealed. We are not apt to notice them until they stand revealed in the disasters which they cause. They work indirectly, slowly, and surprise us in our weakness. For the reason, therefore, that these secondary strains are so difficult to recognize and to provide against, we should regard with a keen suspicion any tendency on our part to temper the

rigor of our moral convictions or practices. Our manners may be flexible but not our morals. A slight relaxing of moral tension here or there in our conduct may throw the whole structure of our lives out of line, and that always means a decreased power of resistance in the hour of trial which must inevitably come.

There was never a time in the busy affairs of man when straight conduct was so much needed as now. The very complexity of our modern life gives scope to the play of these secondary strains. The fever of excitement, the intensity of competition, the struggle for place and prominence, the haste and rush of the daily round, all tend to increase the strain and to apply the pressure variously and constantly to the weak parts of our nature. The mystery is that all do not give way sooner or later. The integrity of the man, the whole man,—that alone can withstand the strain.

In one of Kipling's sketches, "The Bridge Builder," he describes a young engineer who is engaged upon the construction of a bridge across the river Ganges. In the midst of the work the floods from the mountain freshets

swell the river beyond its banks and to the very floor of the bridge. The work is in imminent peril of being swept away with the rising waters. It is the day of judgment for the bridge builder. "For himself the crash meant everything—everything that made a hard life worth living. They would say, the men of his own profession—he remembered the half-pitying things that he himself had said when Lockhart's new water-works burst and broke down in brick-heaps and sludge, and Lockhart's spirit broke in him and he died. He remembered what he himself had said when the Sumao Bridge went out in the big cyclone by the sea; and most he remembered poor Hartropp's face three weeks later when the shame had marked it. . . . There were no excuses in his service. Government might listen, perhaps, but his own kind would judge him by his bridge, as that stood or fell."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